CULTURAL HERITAGE REPORT

EXISTING CONDITIONS REPORT AND PRELIMINARY IMPACT ASSESSMENT

ROUGE PARK BRIDGES TRANSPORTATION MASTER PLAN
MUNICIPAL CLASS ENVIRONMENTAL ASSESSMENT

CITY OF TORONTO, ONTARIO

FINAL REPORT

Prepared for:

Dillon Consulting Limited
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EXECUTIVE SUMMARY

ASI was contracted by Dillon Consulting Limited, on behalf of the City of Toronto, to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment as part of the Rouge Park Bridges Transportation Master Plan Municipal Class Environmental Assessment. The project involves the development of a rehabilitation strategy for five municipal bridges located in Rouge National Urban Park (RNUP). The Rouge Park Bridges Transportation Master Plan study area is located in the north-eastern part of the City of Toronto, and is generally bounded by Markham Road to the west, the Pickering Town Line to the east, Steeles Avenue East to the north, and Highway 401 to the south. For the purposes of this Cultural Heritage Report, the larger study area has been narrowed to three key zones. The roads and bridges within these zones are owned by the City of Toronto, while the surrounding area is federally-owned territory within the RNUP.

- Zone A consists of the Sewell's Suspension Bridge and Milne Bailey Bridge and surrounding road right-of-way for a distance of 500 metres from the centre of the bridges
- Zone B consists of Stott's Bridge and Maxwell's Bridge and surrounding road right-of-way for a distance of 500 metres from the centre of the bridges
- Zone C consists of Hillside Bridge and surrounding road right-of-way for a distance of 500 metres from the centre of the bridges

The purpose of this report is to describe the existing conditions of the study area, present an inventory of built heritage resources and cultural heritage landscapes, provide a preliminary impact assessment, and propose appropriate mitigation measures. As impacts to the road bridges identified in this report (Sewell's Suspension Bridge, Milne Bailey Bridge, Stott's Bridge, Maxwell's Bridge, and Hillside Bridge) are anticipated, a stand-alone HIA is also being completed concurrently to assess potential impacts to these bridges in particular. This research was conducted by Michael Wilcox, Historian, and Leora Bebko, Cultural Heritage Technician, under the project management of John Sleath, Cultural Heritage Specialist, and under the senior project management of Annie Veilleux, Senior Cultural Heritage Specialist and Manager of the Cultural Heritage Division, all of ASI.

The results of background historical research and a review of secondary source material, including historical mapping, indicate that all three zones of the study area have a rural land use history dating back

to the mid-nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are 11 previously identified features of cultural heritage value within the three zones. Five additional features were identified during the fieldwork.

Based on the results of the assessment, the following recommendations have been developed:

1. Construction activities and staging should be suitably planned and undertaken to avoid impacts to the identified cultural heritage resources.

2. Direct impacts are anticipated to Sewell's Bridge, Milne Bailey Bridge, Maxwell's Bridge, Stott's Bridge, and Hillside Bridge (CHRs 1-5). As these five bridges are all included in the City of Toronto Heritage Register and there are direct impacts anticipated, a resource specific Heritage Impact Assessment (HIA) is required for each bridge. A HIA for these bridges is being completed concurrently with this Cultural Heritage Report by ASI that will fulfill this requirement.

3. Direct adverse impacts to CHR 12 (Bridge abutments to Canadian Northern Railway along Sewells Road) are anticipated to include excavation to the road between the abutments and exposure of the abutment foundations. A Cultural Heritage Evaluation Report (CHER) should be completed by a qualified heritage professional with recent and relevant experience during preliminary design in the *Environmental Assessment* phase to determine if CHR 12 has cultural heritage value or interest (CHVI). If CHR 12 is determined to retain CHVI, a Heritage Impact Assessment (HIA) may be required as per section 3.1.5 of the *City of Toronto Official Plan* (City of Toronto, 2019). The HIA should be based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments* and be completed by a qualified heritage professional with recent and relevant experience as early in detailed design as possible. Suitable mitigation measures may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR.

4. Direct impacts are anticipated to CHR 13 (Old Finch/Sewells Road roadscapes) and CHR 14 (Twyn Rivers Road roadscape), including the removal of mature trees and vegetation. However, while the roadscape will be directly impacted, encroachment and construction activities are not anticipated to have direct or indirect adverse impacts to the potential CHVI of the roadscape as a whole. Mitigation measures include limiting the removal of mature trees and vegetation along the roadscape, and where removals are required, post-construction rehabilitation with sympathetic plantings should be implemented.

5. Vibration during construction may impact CHR 12 (Bridge abutments to Canadian Northern Railway along Sewell's Road) as a result of its location in close proximity to excavation activities at the crossing. To ensure the structures are not adversely impacted, a baseline vibration assessment should be undertaken as early as possible during detailed design.

6. Where the implementation of the recommendations of the TMP are anticipated to result in impacts to built heritage resources and cultural heritage landscapes during the preparation of preliminary design during the *Environmental Assessment* phase, additional heritage work may be required to mitigate impacts.

7. If construction or staging is determined to be required within 50 metres of any identified BHR or CHL during preparation of preliminary design during the *Environmental Assessment* phase of this project, suitable mitigation measures should be employed. Suitable mitigation measures could include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the BHR or CHL if work is anticipated within 50 metres. To address the potential for indirect impacts due to construction related vibrations, baseline vibration assessment should be completed during detail design to determine potential vibration impacts to identified BHRs and CHLs.

8. Should future work require an expansion of any of the three zones of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.

9. This report should be submitted to heritage planning staff with Heritage Planning at the City of Toronto, the Ministry of Citizenship and Multiculturalism, heritage staff at Parks Canada, and any other local heritage stakeholders that may have an interest in this project.

PROJECT PERSONNEL

Senior Project Manager:	Annie Veilleux, MA, CAHP Senior Cultural Heritage Specialist | Manager - Cultural Heritage Division
Project Coordinator:	Katrina Thatch, Hon. BA Archaeologist | Project Coordinator - Environmental Assessment Division
Project Manager:	John Sleath, MA Cultural Heritage Specialist | Project Manager - Cultural Heritage Division
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Report Production:	Leora Bebko, MMSt Cultural Heritage Technician - Cultural Heritage Division
	John Sleath
	Michael Wilcox, PhD Historian - Cultural Heritage Division
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Report Reviewer(s):	Annie Veilleux
	John Sleath

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1.0 INTRODUCTION

1.1 Report Purpose

ASI was contracted by Dillon Consulting Limited, on behalf of the City of Toronto, to conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment as part of the Rouge Park Bridges Transportation Master Plan (TMP). The purpose of this report is to present an inventory of known and potential built heritage resources (BHRs) and cultural heritage landscapes (CHLs), identify existing conditions of the project study area, provide a preliminary impact assessment, and propose appropriate mitigation measures.

1.2 Project Overview

The Rouge Park Bridges Transportation Master Plan involves the development of a rehabilitation strategy for five municipal bridges located in Rouge National Urban Park (RNUP). The Rouge Park Bridges TMP was scoped to evaluate alternative solutions including retention, rehabilitation, replacement, and retirement of the structures with consideration for the following:

- Safe and efficient emergency vehicle and maintenance vehicle access
- Access to existing and future land uses, including park-related trails and infrastructure
- Traffic volumes, future demands and available network capacity
- Maintenance of the two-lane rural character of the existing roadways
- Low clearance constraints at CP Rail crossings of Sewell's Road and Meadowvale Road
- Improvements to pedestrian and cycling infrastructure
- RNUP's legislation to conserve nature, culture, and agriculture, including first management priority for ecological integrity
- Provincial Greenbelt policies and City of Toronto policies regarding infrastructure improvements, as well as Parks Canada's RNUP Management Plan guidance in relation to ecological integrity and infrastructure
- Provincial requirements for treatment of heritage bridges (Dillon Consulting Limited, 2022).

1.3 Description of Study Area

This Cultural Heritage Report will focus on the subject bridges with an additional 500 metres of roadway from the centres of the bridges (Figure 1). This project study area has been defined as inclusive of those lands that may contain BHRs or CHLs that may be subject to direct or indirect impacts as a result of the proposed undertaking. The Rouge Park Bridges Transportation Master Plan study area is located in the north-eastern part of the City of Toronto, and is generally bounded by Markham Road to the west, the Pickering Town Line to the east, Steeles Avenue East to the north, and Highway 401 to the south. For the purposes of this Cultural Heritage Report, the larger study area has been narrowed to three zones:

- Zone A consists of the Sewell’s Suspension Bridge and Milne Bailey Bridge and surrounding road right-of-way (25 metres from each side of the road centerline) for a distance of 500 metres from the centre of the bridges

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- Zone C consists of Hillside Bridge and surrounding road right-of-way (25 metres from each side of the road centerline) for a distance of 500 metres from the centre of the bridges (Figure 1)

The roads and bridges within these zones are owned by the City of Toronto, while the surrounding area is federally-owned territory within the RNUP.

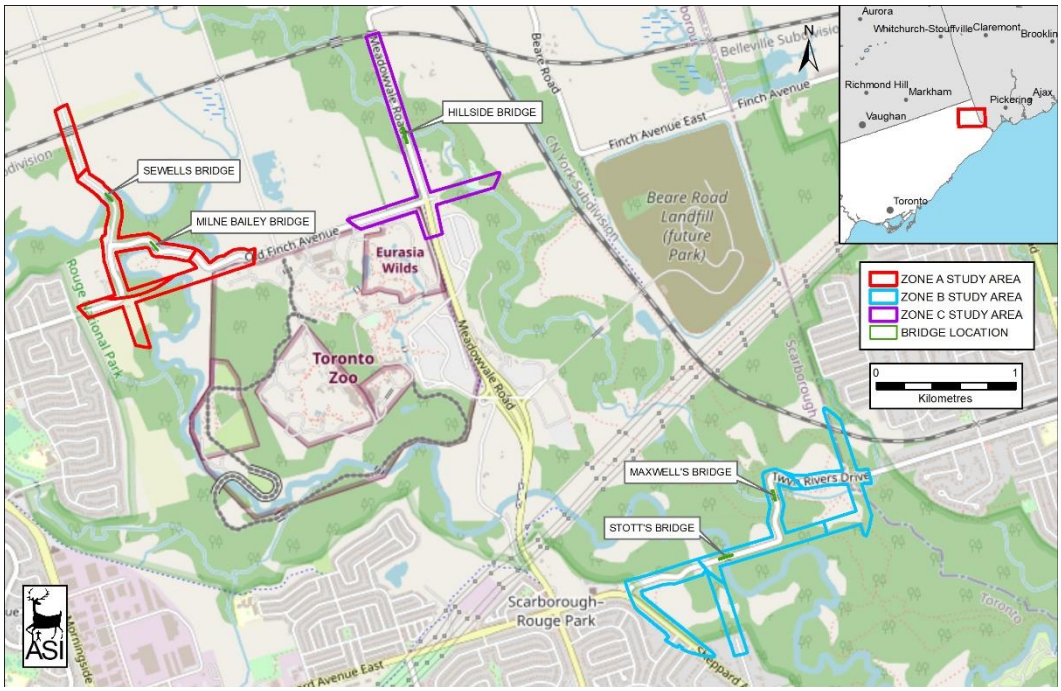

Figure 1: Location of the three zones of the study area
Base Map: ©OpenStreetMap and contributors, Creative Commons-Share Alike License (CC-BY-SA)

2.0 BUILT HERITAGE RESOURCE AND CULTURAL HERITAGE LANDSCAPE ASSESSMENT CONTEXT

2.1 Legislation and Policy Context

The *Ontario Heritage Act (O.H.A.)* (Ontario Heritage Act, R.S.O. c. O.18, 1990 [as Amended in 2021], 1990) is the primary piece of legislation that determines policies, priorities and programs for the conservation of Ontario's heritage. There are many other provincial acts, regulations and policies governing land use planning and resource development that support heritage conservation, including:

- The *Planning Act* (Planning Act, R.S.O. 1990, c. P.13, 1990), which states that "conservation of features of significant architectural, cultural, historical, archaeological or scientific interest" (cultural heritage resources) is a "matter of provincial interest". The *Provincial Policy Statement* (Ministry of Municipal Affairs and Housing, 2020), issued under the *Planning Act*, links heritage

conservation to long-term economic prosperity and requires municipalities and the Crown to conserve significant cultural heritage resources.

- The *Environmental Assessment Act* (Environmental Assessment Act, R.S.O. c. E.18, 1990), which defines "environment" to include cultural conditions that influence the life of humans or a community. Cultural heritage resources, which includes archaeological resources, built heritage resources and cultural heritage landscapes, are important components of those cultural conditions.

The Ministry of Tourism, Culture and Sport is charged under Section 2.0 of the O.H.A. with the responsibility to determine policies, priorities, and programs for the conservation, protection, and preservation of the heritage of Ontario. The Ministry of Tourism, Culture and Sport (now administered by the Ministry) published *Standards and Guidelines for Conservation of Provincial Heritage Properties* (Ministry of Citizenship and Multiculturalism, 2010) (hereinafter "*Standards and Guidelines*"). These *Standards and Guidelines* apply to properties the Government of Ontario owns or controls that have "cultural heritage value or interest" (CHVI). The *Standards and Guidelines* provide a series of guidelines that apply to provincial heritage properties in the areas of identification and evaluation; protection; maintenance; use; and disposal. For the purpose of this report, the *Standards and Guidelines* provide points of reference to aid in determining potential heritage significance in identification of built heritage resources and cultural heritage landscapes. While not directly applicable for use in properties not under provincial ownership, the *Standards and Guidelines* are regarded as best practice for guiding heritage assessments and ensure that additional identification and mitigation measures are considered.

Similarly, the *Ontario Heritage Tool Kit* (Ministry of Citizenship and Multiculturalism, 2006a) provides a guide to evaluate heritage properties. To conserve a built heritage resource or cultural heritage landscape, the *Ontario Heritage Tool Kit* states that a municipality or approval authority may require a heritage impact assessment and/or a conservation plan to guide the approval, modification, or denial of a proposed development.

2.2 Heritage Policies

The three key zones are located within the City of Toronto, though the surrounding area is largely within the Rouge National Urban Park. Policies relating to cultural heritage resources were reviewed from the following sources:

- *City of Toronto Official Plan* (City of Toronto, 2019)
- *Rouge National Urban Park Act* (Rouge National Urban Park Act, 2015)
- *Rouge National Urban Park Management Plan* (Parks Canada, 2019a)
- *Standards and Guidelines for the Conservation of Historic Places in Canada* (Parks Canada, 2010)

2.3 Identification of Built Heritage Resources and Cultural Heritage Landscapes

This Cultural Heritage Report follows guidelines presented in the *Ontario Heritage Tool Kit* (Ministry of Citizenship and Multiculturalism, 2006a) and *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (Ministry of Citizenship and Multiculturalism, 2022). The objective of this report is to present an inventory of known and potential BHRs and CHLs, and to provide a preliminary understanding of known and potential BHRs and CHLs located within areas anticipated to be directly or indirectly impacted by the proposed project.

In the course of the cultural heritage assessment process, all potentially affected BHRs and CHLs are subject to identification and inventory. Generally, when conducting an identification of BHRs and CHLs within a study area, three stages of research and data collection are undertaken to appropriately establish the potential for and existence of BHRs and CHLs in a geographic area: background research and desktop data collection; field review; and identification.

Background historical research, which includes consultation of primary and secondary source research and historical mapping, is undertaken to identify early settlement patterns and broad agents or themes of change in a study area. This stage in the data collection process enables the researcher to determine the presence of sensitive heritage areas that correspond to nineteenth- and twentieth-century settlement and development patterns. To augment data collected during this stage of the research process, federal, provincial, and municipal databases and/or agencies are consulted to obtain information about specific properties that have been previously identified and/or designated as having cultural heritage value. Typically, resources identified during these stages of the research process are reflective of particular architectural styles or construction methods, associated with an important person, place, or event, and contribute to the contextual facets of a particular place, neighbourhood, or intersection.

A field review is then undertaken to confirm the location and condition of previously identified BHRs and CHLs. The field review is also used to identify potential BHRs or CHLs that have not been previously identified on federal, provincial, or municipal databases or through other appropriate agency data sources.

During the cultural heritage assessment process, a property is identified as a potential BHR or CHL based on research, the Ministry of Citizenship and Multiculturalism (MCM) screening tool, and professional expertise. In addition, use of a 40-year-old benchmark is a guiding principle when conducting a preliminary identification of BHRs and CHLs. While identification of a resource that is 40 years old or older does not confer outright heritage significance, this benchmark provides a means to collect information about resources that may retain heritage value. Similarly, if a resource is slightly younger than 40 years old, this does not preclude the resource from having cultural heritage value or interest.

2.4 Background Information Review

To make an identification of previously identified known or potential BHRs and CHLs within the study area, the following resources were consulted as part of this Cultural Heritage Report.

2.4.1 Review of Existing Heritage Inventories

A number of resources were consulted in order to identify existing CHRs within or adjacent to Zones A, B, and C of the study area.[1] These resources include:

- The City of Toronto Heritage Register Map (City of Toronto, n.d.);
- Rouge River Watershed Cultural Heritage Inventory Report Volume 1 (TRCA, 1999);
- Southeast Collector Recreational Enhancements: East Branch of the Toronto Carrying Place, An Historical Overview (ASI, 2011);
- Rouge National Urban Park website (Parks Canada, 2019b);
- The *Ontario Heritage Act Register* (Ontario Heritage Trust, n.d.b);
- The inventory of Ontario Heritage Trust easements (Ontario Heritage Trust, n.d.a);
- The *Places of Worship Inventory* (Ontario Heritage Trust, n.d.c);
- *Ontario Heritage Plaque Database* (Ontario Heritage Trust, n.d.d);
- Database of known cemeteries/burial sites curated by the Ontario Genealogical Society (Ontario Genealogical Society, n.d.);
- *Canada's Historic Places* website (Parks Canada, n.d.a);
- *Directory of Federal Heritage Designations* (Parks Canada, n.d.b); and
- Canadian Heritage River System (Canadian Heritage Rivers Board and Technical Planning Committee, n.d.).

2.4.2 Community Information Gathering

The following stakeholders were contacted to gather information on potential CHRs, active and inactive cemeteries, and areas of identified Indigenous interest within and/or adjacent to the study area:

- Heritage Planning, City of Toronto (email communication 9 October 2020). Heritage Planning has been engaged and involved in the TMP process.
- Karla Barboza, Ministry of Citizenship and Multiculturalism (email communication 9, 13, 14, and 16 October 2020).[2] A response confirmed that there are no additional previously identified heritage resources or concerns regarding the study area.
- Kevin DeMille, Ontario Heritage Trust (email communications 9 and 19 October 2020). A response confirmed that there are no conservation easements or Trust-owned properties within or immediately adjacent to the study area.
- The Scarborough Historical Society (email communication 9 October 2020).[3] A response was still outstanding at the time of report submission.
- Tony Masucci, City of Toronto Archives (email communication 21 and 22 October 2020). A response provided copies of Heritage Designation by-laws for Hillside Methodist Church (By-law 18296) and Milne House (By-law 19831).

[1] Reviewed 8-9 October 2020.
[2] Contacted at registrar@ontario.ca.
[3] Contacted both info@scarboroughhistorical.ca and archives@scarboroughhistorical.ca

- Brett Wilcox, former teacher at Hillside Outdoor Education School (phone communication 26 October 2020). A response provided information on the George Pearce House at 2262 Meadowvale Road.

2.4.3 Community Engagement

Community engagement will be undertaken through submission of this Cultural Heritage Report for review and comment to municipal heritage staff, the Ministry of Citizenship and Multiculturalism, and any other relevant stakeholder with an interest in this project. Additional consultation may also be undertaken through Public Information Centres (P.I.C.s) or public presentations conducted as part of the project. Any comments received though ongoing consultation will be included as appropriate in the final report.

Heritage Planning at the City of Toronto reviewed the draft Existing Conditions portion of this assessment and provided commentary regarding the scoping of this assessment and the required legislative context (City of Toronto Memorandum, 2 February 2022). This memorandum was reviewed and the recommendations for the legislative framework to be employed was added to Section 2.1 of this report.

2.5 Preliminary Impact Assessment Methodology

To assess the potential impacts of the undertaking, identified BHRs and CHLs are considered against a range of possible negative impacts, based on the *Ontario Heritage Tool Kit InfoSheet #5: Heritage Impact Assessments and Conservation Plans* (Ministry of Citizenship and Multiculturalism, 2006b). These include:

- Direct impacts:
  - Destruction of any, or part of any, significant heritage attributes or features; and
  - Alteration that is not sympathetic, or is incompatible, with the historic fabric and appearance.
- Indirect impacts
  - Shadows created that alter the appearance of a heritage attribute or change the viability of a natural feature or plantings, such as a garden;
  - Isolation of a heritage attribute from its surrounding environment, context or a significant relationship;
  - Direct or indirect obstruction of significant views or vistas within, from, or of built and natural features;
  - A change in land use such as rezoning a battlefield from open space to residential use, allowing new development or site alteration to fill in the formerly open spaces; and
  - Land disturbances such as a change in grade that alters soils, and drainage patterns that adversely affect an archaeological resource.

Indirect impacts from construction-related vibration have the potential to negatively affect BHRs or CHLs depending on the type of construction methods and machinery selected for the project and proximity and composition of the identified resources. Potential vibration impacts are defined as having potential

to affect an identified BHRs and CHLs where work is taking place within 50 m of features on the property. A 50 m buffer is applied in the absence of a project-specific defined vibration zone of influence based on existing secondary source literature (Carman et al., 2012; Crispino & D'Apuzzo, 2001; P. Ellis, 1987; Rainer, 1982; Wiss, 1981). This buffer accommodates any additional or potential threat from collisions with heavy machinery or subsidence (Randl, 2001).

Several additional factors are also considered when evaluating potential impacts on identified BHRs and CHLs. These are outlined in a document set out by the Ministry of Culture and Communications (now MCM) and the Ministry of the Environment entitled *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments* (1992) and include:

- Magnitude: the amount of physical alteration or destruction which can be expected;
- Severity: the irreversibility or reversibility of an impact;
- Duration: the length of time an adverse impact persists;
- Frequency: the number of times an impact can be expected;
- Range: the spatial distribution, widespread or site specific, of an adverse impact; and
- Diversity: the number of different kinds of activities to affect a heritage resource.

The proposed undertaking should endeavor to avoid adversely affecting known and potential BHRs and CHLs and interventions should be managed in such a way that identified significant cultural heritage resources are conserved. When the nature of the undertaking is such that adverse impacts are unavoidable, it may be necessary to implement alternative approaches or mitigation strategies that alleviate the negative effects on identified BHRs and CHLs. Mitigation is the process of lessening or negating anticipated adverse impacts to cultural heritage resources and may include, but are not limited to, such actions as avoidance, monitoring, protection, relocation, remedial landscaping, and documentation of the BHR or CHL if to be demolished or relocated.

Various works associated with infrastructure improvements have the potential to affect BHRs and CHLs in a variety of ways, and as such, appropriate mitigation measures for the undertaking need to be considered.

3.0 SUMMARY OF HISTORICAL DEVELOPMENT WITHIN THE STUDY AREA

A review of available primary and secondary source material was undertaken to produce a contextual overview of the study area, including a general description of physiography, Indigenous land use, and Euro-Canadian settlement.

3.1 Physiography

Rouge Park has three physiographic regions: the Oak Ridges Moraine, the South Slope, and the Iroquois Plain.

Zones A and C are situated within the South Slope physiographic region of southern Ontario. The South Slope physiographic region is the southern slope of the Oak Ridges Moraine. The South Slope meets the

Moraine at heights of approximately 300 metres above sea level, and descends southward toward Lake Ontario, ending, in some areas, at elevations below 150 metres above sea level. Numerous streams descend the South Slope, having cut deep valleys in the till (Chapman & Putnam, 1984). The underlying bedrock of the South Slope is Ordovician in age, comprising grey and black shale with some interbedded limestone (Freeman, 1979). The South Slope plain is truncated along its southern margin by a beach ridge and narrow plain that are remnants of glacial Lake Iroquois.

Zone B is situated within the Iroquois Sand Plain physiographic region of southern Ontario. This is a lowland region generally bordering Lake Ontario. This region is characteristically flat and formed by lacustrine deposits laid down by the inundation of Lake Iroquois, a body of water that existed during the late Pleistocene. This region extends from the Trent River to the Niagara River, spanning 300 km. The old shorelines of Lake Iroquois include cliffs, bars, beaches, and boulder pavements. The old sandbars in this region are good aquifers that supply water to farms and villages. The gravel bars are quarried for road and building material, while the clays of the old lakebed have been used for the manufacture of bricks (Chapman & Putnam, 1984). The underlying bedrock of the Iroquois Plain is the same as that of the South Slope (Freeman, 1979). Up to 15 metres high, this bluff rises 50 to 60 metres above Lake Ontario. Below the bluff the ancient lakebed forms a narrow lowland. The primary deposit is sand deposited in shallow waters. The Iroquois Plain is comparatively broad, measuring about 10 km in width.

The regional drainage system is largely shaped by the three general physiographic zones. A series of rivers and creeks that follow roughly parallel southeasterly courses flow from their headwaters in the Oak Ridges Moraine to Lake Ontario. The major watersheds of concern for the present study are the Rouge River and the Little Rouge Creek.

The linear fabric of watercourses would have provided a permanent system of landmarks to orient travelers. Canoe travel would have been limited to the lower portions of the waterways. These watercourses would also have tended to orient foot travel to a parallel path, as trails would have been directed parallel to the watercourse orientation by virtue of the difficulty of negotiating steep ravines, swampy lowlands, and troublesome water crossings. These systems linked Lake Ontario to the upper Great Lakes through Lake Simcoe. Perhaps the busiest and best documented of these routes was the Toronto Carrying Place trail, which followed the Humber River valley northward over the drainage divide to the headwaters of the West Branch of the Holland River (Austin, 1995; Robinson, 1965). A related branch of this trail ran from the mouth of the Rouge River northward to the headwaters of Little Rouge Creek and over the drainage divide to the East Branch of the Holland River at Holland Landing (Robinson, 1965).

Furthermore, the topography created by the watercourses would have impacted how roads were surveyed. Both the 1878 and 1914 maps below (Figure 3 and Figure 4) illustrate that the gridded pattern so common in southern Ontario – and in the Scarborough area in particular – was not always possible in the Rouge valley. Rather, roadways generally followed the natural topography, meaning several winding roads and others which come to abrupt dead ends. Similarly, watercourses determined the location of mills in the area. Mill owners sought to develop mills in the Rouge valley because of its proximity to the Rouge River and its tributaries, as well as to surrounding agricultural fields. Once the resources (such as grain or timber) were processed, they could be quickly and efficiently moved to local markets.

A remarkable diversity of native ecosystems is found within Rouge Park, including mature mixed and deciduous upland and lowland forests featuring trees over a century old. The park also contains various

types of wetlands, savannahs, and dry meadows (TRCA 2006). In fact, the most southerly portion of Rouge Park consists of extensive wetlands that constitute over half of the total remaining wetlands in the Toronto region.

As a result of Euro-Canadian forest clearance and agriculture, the Rouge River and its tributaries have been substantially altered since the seventeenth century. Deforestation has likely resulted in larger volumes of water flowing into the streams as surface run-off, increasing both the temperature of the watercourses and their sediment content. In addition, the removal of the forest cover has permitted solar radiation to further warm the waters. These and other modern alterations are also likely to have resulted in increased rates of waterflow, which concomitantly, have exacerbated erosion and degradation of the water table.

3.2 Indigenous Land Use and Settlement

Current archaeological evidence indicates humans were present in southern Ontario approximately 13,000 years before present (B.P.) (Ferris, 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 B.P., the environment had progressively warmed (Edwards & Fritz, 1988) and populations now occupied less extensive territories (C. J. Ellis & Deller, 1990).

Between approximately 10,000-5,500 B.P., the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 B.P.; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 B.P. and is indicative of increased social organization and investment of labour into social infrastructure (Brown, 1995, p. 13; C. J. Ellis et al., 1990, 2009).

Between 3,000-2,500 B.P., populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. The Woodland period begins around 2,500 B.P. and exchange and interaction networks broaden at this time (Spence et al., 1990, pp. 136, 138) and by approximately 2,000 B.P., evidence exists for small community camps, focusing on the seasonal harvesting of resources (Spence et al., 1990, pp. 155, 164). By 1,500 B.P. there is macro botanical evidence for maize in southern Ontario, and it is thought that maize only supplemented people's diet. There is earlier phytolithic evidence for maize in central New York State by 2,300 B.P. – it is likely that once similar analyses are conducted on Ontario ceramic vessels of the same period, the same evidence will be found (Birch & Williamson, 2013, pp. 13–15). As is evident in detailed Anishinaabeg ethnographies, winter was a period during which some families would depart from the larger group as it was easier to sustain smaller populations (Rogers, 1962). It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From the beginning of the Late Woodland period at approximately 1,000 B.P., lifeways became more similar to that described in early historical documents. Between approximately 1000-1300 Common Era

(C.E.), village sites focused on horticulture increased in the archaeological record while the seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised by some (Williamson, 1990, p. 317). By 1300-1450 C.E., archaeological research focusing on these horticultural societies note that this episodic community disintegration was no longer practised and these populations now communally occupied sites throughout the year (Dodd et al., 1990, p. 343). By the mid-sixteenth century these small villages had coalesced into larger communities (Birch et al., 2021). Through this process, the socio-political organization of these First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. Other First Nation communities continued to practice residential mobility and to harvest available resources across landscapes they returned to seasonally/annually.

By 1600 C.E., the Huron-Wendat were encountered by the first European explorers and missionaries in Simcoe County. Samuel de Champlain in 1615 reported that a group of Iroquoian-speaking people situated between the warring Haudenosaunee and Huron-Wendat were at peace with both groups and remained “la nation neutre” in the conflict. Like the Huron-Wendat, Petun, and Haudenosaunee, the Neutral or Attawandaron people were settled village agriculturalists. In the 1640s, the Attawandaron and the Huron-Wendat (and their Algonquian allies such as the Nippissing and Odawa) were decimated by epidemics and ultimately dispersed by the Haudenosaunee. Shortly afterwards, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. During this time of warfare and upheaval, Anishinaabeg groups temporarily left the area until the ‘smoke had cleared’ (Migizi, 2018, also included in Section 3.2.1). By the 1690s however, the Anishinaabeg were the only communities with a permanent presence in southern Ontario. From the beginning of the eighteenth century to the assertion of British sovereignty in 1763, there was no interruption to Anishinaabeg control and use of southern Ontario.

The arrival of European trade goods in the sixteenth century, Europeans themselves in the seventeenth century, and increasing settlement efforts in the eighteenth century all significantly impacted traditional ways of life in Southern Ontario. Over time, war and disease contributed to death, dispersion, and displacement of many Indigenous peoples across the region. The Euro-Canadian population grew in both numbers and power through the eighteenth and nineteenth centuries and treaties between colonial administrators and First Nations representatives began to be negotiated. The study area is within the Johnson-Butler Purchases and in the traditional and treaty territory of the Michi Saagiig and Chippewa Nations, collectively known as the Williams Treaties First Nations, including the Mississaugas of Alderville First Nation, Curve Lake First Nation, Hiawatha First Nation, Scugog Island First Nation and the Chippewas of Beausoleil First Nation, Georgina Island First Nation and the Rama First Nation (Williams Treaties First Nations, 2017).

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The purpose of the Johnson-Butler Purchases of 1787/1788 was to acquire from the Mississaugas the Carrying Place Trail and lands along the north shore of Lake Ontario from the Trent River to Etobicoke Creek.

As part of the Johnson-Butler Purchases, the British signed a treaty, sometimes referred to as the "Gunshot Treaty" with the Mississaugas in 1787 covering the north shore of Lake Ontario, beginning at the eastern boundary of the Toronto Purchase and continuing east to the Bay of Quinte, where it meets the Crawford Purchase. It was referred to as the "Gunshot Treaty" because it covered the land as far back from the lake as a person could hear a gunshot. Compensation for the land apparently included "approximately £2,000 and goods such as muskets, ammunition, tobacco, laced hats and enough red cloth for 12 coats" (Surtees, 1984, pp. 37–45). First discussions about acquiring this land are said to have come about while the land ceded in the Toronto Purchase of 1787 was being surveyed and paid for (Surtees, 1984, pp. 37–45). During this meeting with the Mississaugas, Sir John Johnson and Colonel John Butler proposed the purchase of lands east of the Toronto Purchase (Fullerton & Mississaugas of the Credit First Nation, 2015). However, descriptions of the treaty differ between the British and Mississaugas, including the depth of the boundaries: "Rice Lake and Lake Simcoe, located about 13 miles and 48 miles north of Lake Ontario, respectively, were not mentioned as landmarks in the First Nations' description of the lands to be ceded. Additionally, original descriptions provided by the Chiefs of Rice Lake indicate a maximum depth of ten miles, versus an average of 15-16 miles in Colonel Butler's description" (Fullerton & Mississaugas of the Credit First Nation, 2015).

However, records of the acquisition were not clear regarding the extent of lands agreed upon (Surtees, 1984, pp. 37–45). To clarify this, in October and November of 1923, the governments of Canada and Ontario, chaired by A.S. Williams, signed treaties with the Chippewa and Michi Saagiig for three large tracts of land in central Ontario and the northern shore of Lake Ontario, the last substantial portion of land in southern Ontario that had not yet been ceded to the government (Crown-Indigenous Relations and Northern Affairs, 2013).

In 2018 the Government of Canada and Province of Ontario reached a settlement with the Williams Treaties First Nations reaffirming the recognized Treaty harvesting rights in the Williams Treaties territories of each of the seven nations. Both levels of government apologized to the impacted Nations for the injustices incurred by the 1923 Williams Treaties. These were the only treaties in Canada that extinguished the harvesting, fishing, and hunting rights of the seven First Nations. The 2018 settlement agreement reaffirmed the harvesting rights for all seven Nations in the following pre-confederation treaty territories: Treaty 5, Treaty 16, Treaty 18, Treaty 20, Treaty 27 and 27 ¼, the Crawford Purchase, and the Gunshot Treaty.

3.2.1 Oral Histories

Oral histories from Indigenous communities are primary sources that can hold important historical information and their inclusion can provide an indigenous perspective to archaeological assessments and cultural heritage reports.

Alderville First Nation

The following oral history was provided by Gidigaa Migizi-ban, a respected Knowledge Keeper and Elder for the Michi Saagiig Nation, relaying oral tradition provided to him by his Elders.

> "The traditional homelands of the Michi Saagiig (Mississauga Anishinaabeg) encompass a vast area of what is now known as southern Ontario. The Michi Saagiig are known as "the people of the big river mouths" and were also known as the "Salmon People" who occupied and

fished the north shore of Lake Ontario where the various tributaries emptied into the lake. Their territories extended north into and beyond the Kawarthas as winter hunting grounds on which they would break off into smaller social groups for the season, hunting and trapping on these lands, then returning to the lakeshore in spring for the summer months.

The Michi Saagiig were a highly mobile people, travelling vast distances to procure subsistence for their people. They were also known as the "Peacekeepers" among Indigenous nations. The Michi Saagiig homelands were located directly between two very powerful Confederacies: The Three Fires Confederacy to the north and the Haudenosaunee Confederacy to the south. The Michi Saagiig were the negotiators, the messengers, the diplomats, and they successfully mediated peace throughout this area of Ontario for countless generations.

Michi Saagiig oral histories speak to their people being in this area of Ontario for thousands of years. These stories recount the "Old Ones" who spoke an ancient Algonquian dialect. The histories explain that the current Ojibwa phonology is the 5th transformation of this language, demonstrating a linguistic connection that spans back into deep time. The Michi Saagiig of today are the descendants of the ancient peoples who lived in Ontario during the Archaic and Paleo-Indian periods. They are the original inhabitants of southern Ontario, and they are still here today.

The traditional territories of the Michi Saagiig span from Gananoque in the east, all along the north shore of Lake Ontario, west to the north shore of Lake Erie at Long Point. The territory spreads as far north as the tributaries that flow into these lakes, from Bancroft and north of the Haliburton highlands. This also includes all the tributaries that flow from the height of land north of Toronto like the Oak Ridges Moraine, and all of the rivers that flow into Lake Ontario (the Rideau, the Salmon, the Ganaraska, the Moira, the Trent, the Don, the Rouge, the Etobicoke, the Humber, and the Credit, as well as Wilmot and 16 Mile Creeks) through Burlington Bay and the Niagara region including the Welland and Niagara Rivers, and beyond. The western side of the Michi Saagiig Nation was located around the Grand River which was used as a portage route as the Niagara portage was too dangerous. The Michi Saagiig would portage from present-day Burlington to the Grand River and travel south to the open water on Lake Erie.

Michi Saagiig oral histories also speak to the occurrence of people coming into their territories sometime between 500-1000 AD seeking to establish villages and a corn growing economy – these newcomers included peoples that would later be known as the Huron-Wendat, Neutral, Petun/Tobacco Nations. The Michi Saagiig made Treaties with these newcomers and granted them permission to stay with the understanding that they were visitors in these lands. Wampum was made to record these contracts, ceremonies would have bound each nation to their respective responsibilities within the political relationship, and these contracts would have been renewed annually (see Migizi & Kapyrka, 2015). These visitors were extremely successful as their corn economy grew as well as their populations. However, it was understood by all nations involved that this area of Ontario were the homeland territories of the Michi Saagiig.

The Odawa Nation worked with the Michi Saagiig to meet with the Huron-Wendat, the Petun, and Neutral Nations to continue the amicable political and economic relationship that existed – a symbiotic relationship that was mainly policed and enforced by the Odawa people. Problems arose for the Michi Saagiig in the 1600s when the European way of life was introduced into southern Ontario. Also, around the same time, the Haudenosaunee were given firearms by the colonial governments in New York and Albany which ultimately made an expansion possible for them into Michi Saagiig territories. There began skirmishes with the various nations living in Ontario at the time. The Haudenosaunee engaged in fighting with the Huron-Wendat and between that and the onslaught of European diseases, the Iroquoian speaking peoples in Ontario were decimated.

The onset of colonial settlement and missionary involvement severely disrupted the original relationships between these Indigenous nations. Disease and warfare had a devastating impact upon the Indigenous peoples of Ontario, especially the large sedentary villages, which mostly included Iroquoian speaking peoples. The Michi Saagiig were largely able to avoid the devastation caused by these processes by retreating to their wintering grounds to the north, essentially waiting for the smoke to clear. Michi Saagiig Elder Gitiga Migizi (2017) recounts:

> *"We weren't affected as much as the larger villages because we learned to paddle away for several years until everything settled down. And we came back and tried to bury the bones of the Huron but it was overwhelming, it was all over, there were bones all over – that is our story.*
>
> *There is a misnomer here, that this area of Ontario is not our traditional territory and that we came in here after the Huron-Wendat left or were defeated, but that is not true. That is a big misconception of our history that needs to be corrected. We are the traditional people, we are the ones that signed treaties with the Crown. We are recognized as the ones who signed these treaties and we are the ones to be dealt with officially in any matters concerning territory in southern Ontario.*
>
> *We had peacemakers go to the Haudenosaunee and live amongst them in order to change their ways. We had also diplomatically dealt with some of the strong chiefs to the north and tried to make peace as much as possible. So we are very important in terms of keeping the balance of relationships in harmony.*
>
> *Some of the old leaders recognized that it became increasingly difficult to keep the peace after the Europeans introduced guns. But we still continued to meet, and we still continued to have some wampum, which doesn't mean we negated our territory or gave up our territory – we did not do that. We still consider ourselves a sovereign nation despite legal challenges against that. We still view ourselves as a nation and the government must negotiate from that basis."*

Often times, southern Ontario is described as being "vacant" after the dispersal of the Huron-Wendat peoples in 1649 (who fled east to Quebec and south to the United States). This is misleading as these territories remained the homelands of the Michi Saagiig Nation.

> The Michi Saagiig participated in eighteen treaties from 1781 to 1923 to allow the growing number of European settlers to establish in Ontario. Pressures from increased settlement forced the Michi Saagiig to slowly move into small family groups around the present-day communities: Curve Lake First Nation, Hiawatha First Nation, Alderville First Nation, Scugog Island First Nation, New Credit First Nation, and Mississauga First Nation.
> The Michi Saagiig have been in Ontario for thousands of years, and they remain here to this day."

3.3 Historical Euro-Canadian Township Survey and Settlement

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes continued the use of existing Indigenous trails that typically followed the highlands adjacent to various creeks and rivers (Archaeological Services Inc., 2006). Early European settlements occupied similar locations as Indigenous settlements as they were generally accessible by trail or water routes and would have been in locations with good soil and suitable topography to ensure adequate drainage.

Sites on the Rouge River were critical locations for the Michi Saagiig Nation. The watercourse was integral to seasonal harvesting rounds and would have involved considerable interaction with settlers in the eighteenth century as they were situated on critical transportation routes to the north. Alexander Henry, a Northwest Company fur trader and merchant, for example, visited with the Michi Saagiig in 1764 and in his published account describes villages along the Humber and Rouge Rivers (Henry & Gough, 1992).

Throughout the period of initial European settlement, Indigenous groups continued to inhabit Southern Ontario, and continued to fish, gather, and hunt within their traditional and treaty territories, albeit often with legal and informal restrictions imposed by colonial authorities and settlers. In many cases, Indigenous peoples acted as guides and teachers, passing on their traditional knowledge to Euro-Canadian settlers, allowing them to sustain themselves in their new homes. Indigenous peoples entered into economic arrangements and partnerships, and often inter-married with settlers. However, pervasive and systemic oppression and marginalization of Indigenous peoples also characterized Euro-Canadian colonization, with thousands being displaced from their lands, denied access to traditional and treaty hunting, fishing, and collecting grounds, and forced to assimilate with Euro-Canadian culture through mandatory attendance at Day and Residential Schools (Ray, 2005; Rogers & Smith, 1994).

Historically, the three zones of the study area are located in the former Township of Scarborough, County of York.

- Zone A includes lands along the east-west boundary between the 3rd and 4th Concession from Lots 7 to 9; along the north-south boundary between Lots 8 and 9 of the south half of the 4th Concession and the northern quarter of the 3rd Concession; and along a northeast/southwest trajectory on the south half of Lot 8 of the 4th Concession

- Zone B includes lands along the east-west boundary between the 2nd and 3rd Concession from Lots 1 to 3; along the north-south boundary between the Lots 2 and 3 of the northern quarter of the 2nd Concession; along a northeast/southwest trajectory along the northern half of Lot 3 of the 2nd Concession; along the north-south boundary between Lot 1, 3rd Concession (York County) and Lot 35, 1st Concession (Ontario County); and a small portion at the south quarter of Lot 1, 3rd Concession
- Zone C includes lands along the east-west boundary between the 3rd and 4th Concession from Lots 4 to 5 and along the north-south boundary between Lots 4 and 5 of the south half of the 4th Concession and the northern quarter of the 3rd Concession

3.3.1 Township of Scarborough

The township of Scarborough, originally called Glasgow Township, was partially laid out to the east of the township of York. Beginning in 1791, Augustus Jones surveyed the new township, and a baseline was laid out. The early survey of the township was found to be faulty and carelessly done, resulting in numerous lawsuits among property owners. To remedy this situation, a new survey of the township was undertaken under F.F. Passmore in 1864 to correct and confirm the township concession lines.

The first land grants were patented in Scarborough in 1796, and were issued to Loyalists, high ranking Upper Canadian government officials, and some absentee Loyalist grantees. Among the first landowners were: Captain William Mayne (1796); David Thomson (1801); Captain John McGill (1797); Captain William Demont (1798); John McDougall (1802); Sheriff Alexander McDonell (1806); and Donald McLean, clerk of the House of Assembly (1805).

The Euro-Canadian settlement of Scarborough remained slow, and in 1802 there were just 89 settlers in the Township. In 1803, the township contained just one assessable house and no grist or sawmills. In 1809 the population had increased to 140 men, women and children. The settlement and improvement of the township was aided when the Danforth Road was constructed across the township but was checked in 1812 with the outbreak of the war. By 1819, new settlement was augmented by settlers from Britain, Scotland and Ireland, but the population remained low at just 349 inhabitants (Bonis, 1968).

British and American settlers began to settle in greater numbers throughout the first half of the nineteenth century. By 1850, the year the Township was incorporated, nearly 4,000 people called Scarborough home, and they had established a prosperous agricultural settlement. Throughout the second half of the nineteenth century, several villages were established in Scarborough Township. These communities, located at the crossroads of north-south and east-west thoroughfares, often had a mill, blacksmith shop, train station, inn, post office, church, and a school (Scarborough Historical Society, n.d.).

In the twentieth century, Scarborough continued to grow at a rapid pace, all while becoming an important suburban community on the outskirts of Toronto. It became a borough in 1967 and was incorporated as a city in 1983. As part of municipal restructuring in Toronto in 1997, the city of Scarborough was amalgamated with five other municipalities and is now a constituent part of the City of Toronto (Scarborough Historical Society, n.d.). All through these twentieth-century developments, though, the three zones of the study area have remained natural forested areas of the Rouge River watershed.

3.3.2 History of the Rouge National Urban Park

The lands that now encompass the Rouge National Urban Park had formerly been home to a great diversity of leisure, economic, and industrial activities. Among the many types land uses were apple orchards, agricultural farms, parks, mills, gravel pits, landfills, hotels and inns, and schoolhouses, amongst others. The area remains the site of significant biodiversity, including forest, rivers, farmlands, and wetlands, as well as featuring unique wildlife and plants. In the early 1990s, the Province of Ontario partnered with various municipalities, the Toronto and Region Conservation Authority (TRCA), the Friends of the Rouge Watershed, the Rouge Park Alliance, Indigenous communities, conservationists, and community activists to create Rouge Park on lands in Scarborough, Pickering, and Markham.

Beginning in 2011, efforts to create the first urban National Park in Canada got underway. Soon thereafter, land transfers, funding, and legislation came into effect, and in 2015, the Rouge National Urban Park was formally established. Subsequent land transfers have enabled the park to grow to 79.1 km^2. The RUNP is now home to environmental education initiatives, campgrounds, hiking trails, and public events (Parks Canada, 2019b).

3.3.3 Railway History

The Canadian Pacific Railway (CPR) runs in an east-west direction at the north end of Zones A and C, forming a physical imprint on the land in stark contrast to the agricultural and forested lands surrounding it. Between the late 1910s and the early 1930s, a second railway, the Canadian Northern Railway (CNoR), operated in parallel with the CPR.

The Canadian Northern Railway

The CNoR was founded in 1899 by William Mackenzie and Donald Mann, two former Canadian Pacific Railway employees. In 1896, Mackenzie and Mann introduced service into Northern Manitoba, and by 1902, had rail lines connecting to Edmonton in the west and Port Arthur (present-day Thunder Bay) in the east. By 1903, the Company was also operating in Quebec and Nova Scotia. In 1908, the rail line was completed between Toronto and Port Arthur via Sudbury. The railway continued its expansion, and by 1915 the Canadian Northern was a trans-continental line connecting Quebec City to Vancouver with a total of 16,093 kilometres of track (Library and Archives Canada, 2014; Peltenburg, 2019).

Strong competition with the Grand Trunk Railway (GTR) and the Canadian Pacific Railway (CPR) led to the company's bankruptcy in 1918. In 1923 the Canadian Northern Railway was incorporated by the Canadian National Railways (CN), with the former CNoR lines forming a major component of the CN network. The GTR was also assumed by the CN in 1923, and duplicate rail lines were gradually eliminated where they existed. Canadian National continued to operate the railway line through the northern section of the study area until the mid 1930s. Overall, though, the majority of the CNoR lines were ultimately abandoned or sold in the 1920s and 1930s, with a smaller number being overseen by CN in the decades thereafter (Library and Archives Canada, 2014; Peltenburg, 2019).

The Canadian Pacific Railway

In 1885 the CPR was completed, linking west and east Canada. The CPR was intended to link British Columbia with the east coast, and to bring it into the Canadian Confederacy. A condition of British Columbia for joining the Confederacy in 1868 was the construction of a 'transcontinental wagon road' within two years of their admission. However, a range of setbacks and issues with policy and funding, including dependency on American interests, delayed the construction of the CPR until the early 1880s. On October 21, 1880, the contract for the construction of the railroad was signed. The CPR was given Royal Assent on February 15th, 1881 and a Royal Charter shortly after. In May 1885 the final spike was set within the eastern section of the CPR, and on November 8th of the same year the last spike in the transcontinental railway was driven in (Churcher, 2013).

There are various segments of the CPR line through southern Ontario. The Ontario and Quebec Railway travelled between Perth and Toronto via Tweed, Havelock, Peterborough, Agincourt, Leaside and North Toronto. The other, which runs through the subject study area, was the CP Lakeshore Railway, which travelled between Perth and Toronto via the communities on the north shore of Lake Ontario (Canadian Pacific, 2020).

3.4 Review of Historical Mapping from the Nineteenth Century

The study area has been divided into three zones for ease of understanding. Historically, the two bridges in Zone A are located on the former Lot 8, Concession 4; the two bridges in Zone B are located on the former Lot 2, Concession 3; and the bridge in Zone C is located on the property boundary between Lots 4 and 5, Concession 4. All three zones are in the former Township of Scarborough, County of York.

The 1860 *Map of the County of York* (Tremaine, 1860) and the 1878 *Illustrated Historical Atlas of the County of York* (Miles & Co., 1878), were examined to determine the presence of historical features within the study area during the nineteenth century (Figure 2 and Figure 3).[4]

Details of historical property owners and historical features in the study area are listed in Table 1.

[4] It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases. For instance, they were often financed by subscription limiting the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases. The use of historical map sources to reconstruct or predict the location of former features within the modern landscape generally begins by using common reference points between the various sources. The historical maps are geo-referenced to provide the most accurate determination of the location of any property on a modern map. The results of this exercise can often be imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including differences of scale and resolution, and distortions introduced by reproduction of the sources.

Table 1: Nineteenth-century property owner(s) and historical features(s)

			1860 Map of the County of York		1878 Illustrated Historical Atlas of the County of York	
	Con #	Lot #	Property Owner(s)	Historical Feature(s)	Property Owner(s)	Historical Feature(s)
Zone A	4	8	Wm. A. Milne	Waterway, Saw Mill	Wm. A. Milne	Waterway, Roadway, Saw Mill, Forest
Zone B	3	2	James A. Maxwell	Waterway, Roadway	James A. Maxwell	Waterway, Roadway, Grist Mill
Zone C	4	4 and 5	P. Boyour (4) and G. Pierce (5)	Roadway, Waterway, Saw Mill on each Lot, and a School House on Lot 5	Jno. Diller (4) and Mrs. Pearce (5)	Roadway, Waterway, and a School House on Lot 4

3.4.1 Zone A

The 1860 map shows the Rouge River following a similar path to its present alignment. A sawmill is located on the property of William A. Milne, and the surrounding area was likely wooded. A boundary (now Old Finch Avenue) traverses east-west and another boundary (now Sewells Road) traverses north-south; both follow a straight line and may reflect concession and lot boundaries rather than operational roadways.

The 1878 map continues to show the sawmill in the same location as the 1860 map. A roadway (now Old Finch Avenue) appears to be complete travelling along an arced route, perhaps to reach the sawmill. The road crosses the Rouge River, and it was likely carried by a bridge, though one is not depicted. Dense forest appears on the entirety of Milne's property. A house and small orchard appear at the northwest corner of Old Finch and Sewells Road on a different property belonging to Milne, and which is now a designated heritage property (Milne House).

3.4.2 Zone B

The 1860 map shows both the Rouge River and Little Rouge Creek following a similar path to their present alignment. A boundary (now Sheppard Avenue East) traverses east-west on both sides of the Rouge River and may reflect the concession boundary rather an operational roadway. Twyn Rivers Drive is not yet depicted as in later mapping.

The 1878 map shows the waterways and roadways in the same alignment as in the 1860 map, though the roadway east of the Rouge River does not appear to be extant. A grist mill now appears along the Little Rouge Creek at the northern limit of the Maxwell property.

3.4.3 Zone C

The 1860 map shows the Little Rouge Creek following a similar path to its present alignment. Two sawmills are located adjacent to the study area, one on the property of G. Pierce and the other on the property of P. Boyour. A roadway (now Old Finch Avenue) traverses east-west and another roadway (now Meadowvale Road) traverses north-south. A schoolhouse is located on the southeast corner of the Pierce property.

The 1878 map shows the roadways and waterways in the same alignment as in the 1860 map. The sawmills evident on the 1860 map no longer appear. The schoolhouse has moved across the road to the northeast corner of the intersection of Meadowvale Road and Old Finch Avenue, and a house – presumably belonging to Mrs. Pearce – now appears in the location of the former school.

Figure 2: The study area overlaid on the 1860 Tremaine's Map of the County of York
Base Map: (Tremaine, 1860)

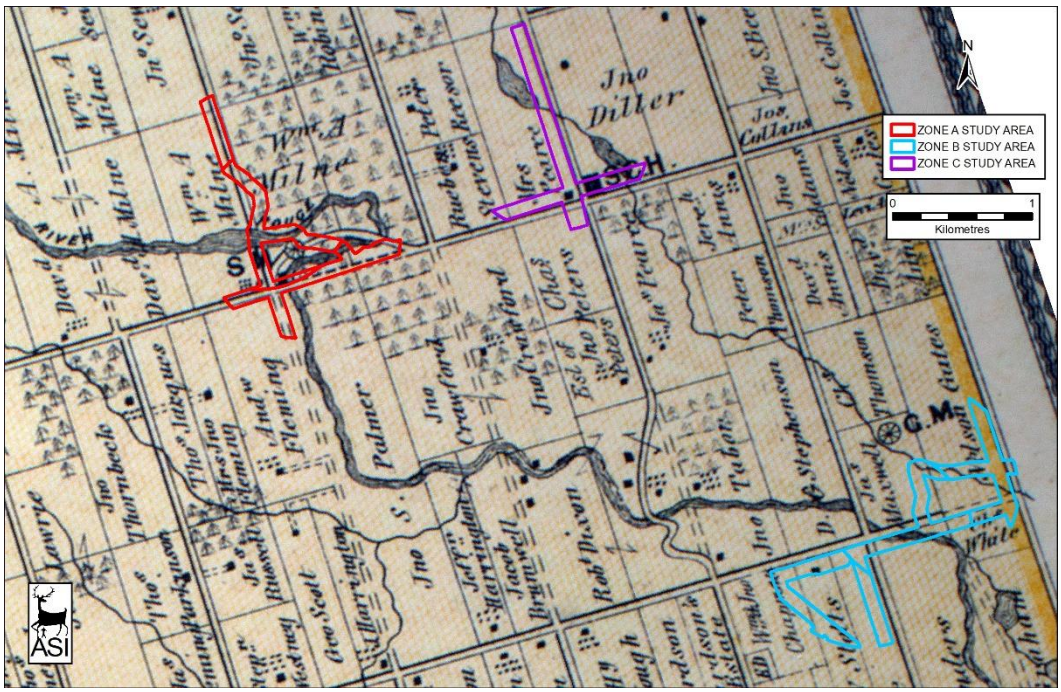


Figure 3: The study area overlaid on the 1878 Illustrated Historical Atlas of the County of York
Base Map: (Miles & Co., 1878)

3.5 Review of Historical Mapping from the Twentieth Century

In addition to nineteenth-century mapping, historical topographic mapping and aerial photographs from the twentieth century were examined. This report presents maps and aerial photographs from 1914, 1936, 1954, 1974, and 1992 (Figure 4 to Figure 9). These do not represent the full range of maps consulted for the purpose of this study but were judged to cover the full range of land uses that occurred in the area during this period.

3.5.1 Zone A

Twentieth-century mapping consistently shows the area in a rural setting, with woods to the north and south and agricultural fields to the west and east. Only the 1992 aerial photograph shows that there has been some suburban development to the west. All maps show the Rouge River running along its present alignment and both Sewells Road and Old Finch Avenue. The 1914 map shows only the CPR running along its extant alignment, while all subsequent maps show both the active CPR and the abandoned CNoR lines. The Sewell's Bridge is shown as a wooden bridge on the 1914 map, though research points to the Suspension bridge being built in 1912. The Old Finch Avenue crossing is shown as an iron bridge in 1914 and 1936, which was replaced by the Milne Bailey Bridge in 1954, and subsequently replaced by a second Bailey Bridge in 1988.

3.5.2 Zone B

Twentieth-century mapping consistently shows the area in a rural setting, with wooded areas following along the riverbeds along a northwest-southeast axis. Agricultural fields are found southwest and northeast of the area, with only the 1992 aerial photograph (Figure 8) showing significant suburban development to the southwest. All maps show the Rouge River and Little Rouge Creek running along their present alignments. Further, all maps show Sheppard Avenue East and Twyn Rivers Drive along their present alignments. The bridges crossing the Rouge River and the Little Rouge Creek at the locations of the Stott's and Maxwell's Bridges are both shown as wooden structures in 1914. Both were replaced by the time of the 1936 map.

3.5.3 Zone C

Twentieth-century mapping consistently shows the area in a rural setting, with wooded areas following along the Little Rouge Creek riverbed along a northwest-southeast axis. Agricultural fields are found to the east, west, and southwest of the area, with only the 1992 aerial photograph showing significant change with the creation of the Metro Toronto Zoo on the site of former agricultural and wooded lands to the southwest and parking lot to the southeast. All maps show the Little Rouge Creek running along its present alignment and each shows Meadowvale Road and Old Finch Avenue along their present alignments. Further, the 1914 map shows a bridge of an unknown material crossing the Little Rouge Creek at the site of what became the Hillside Bridge in 1917.

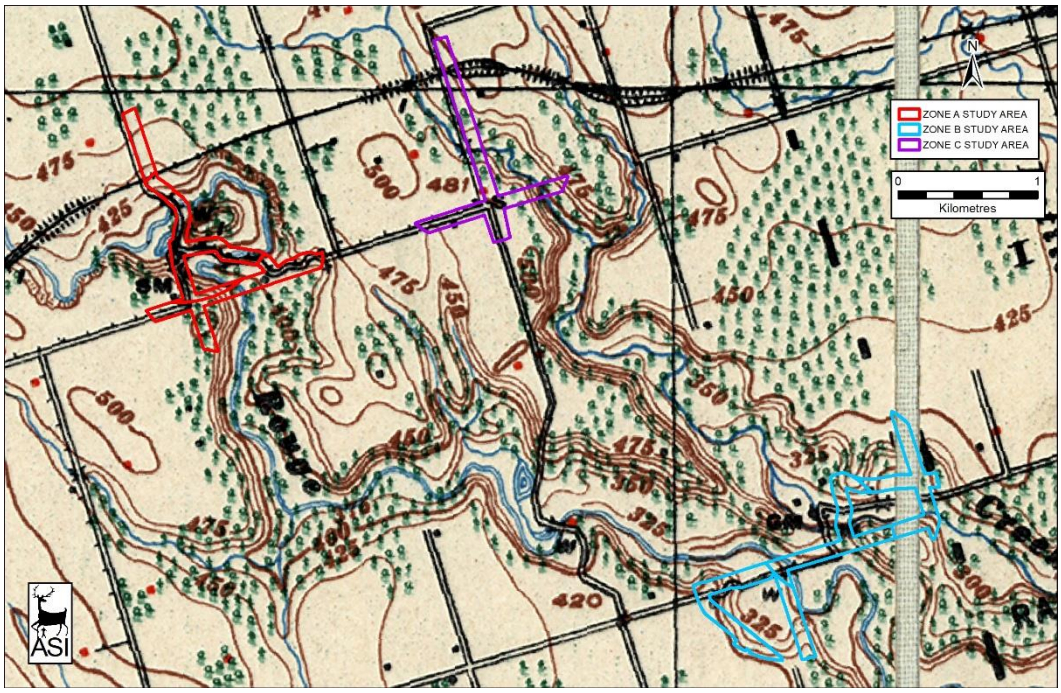


Figure 4: The study area overlaid on the 1914 Markham topographic map
Base Map: (Department of Militia and Defence, 1914)

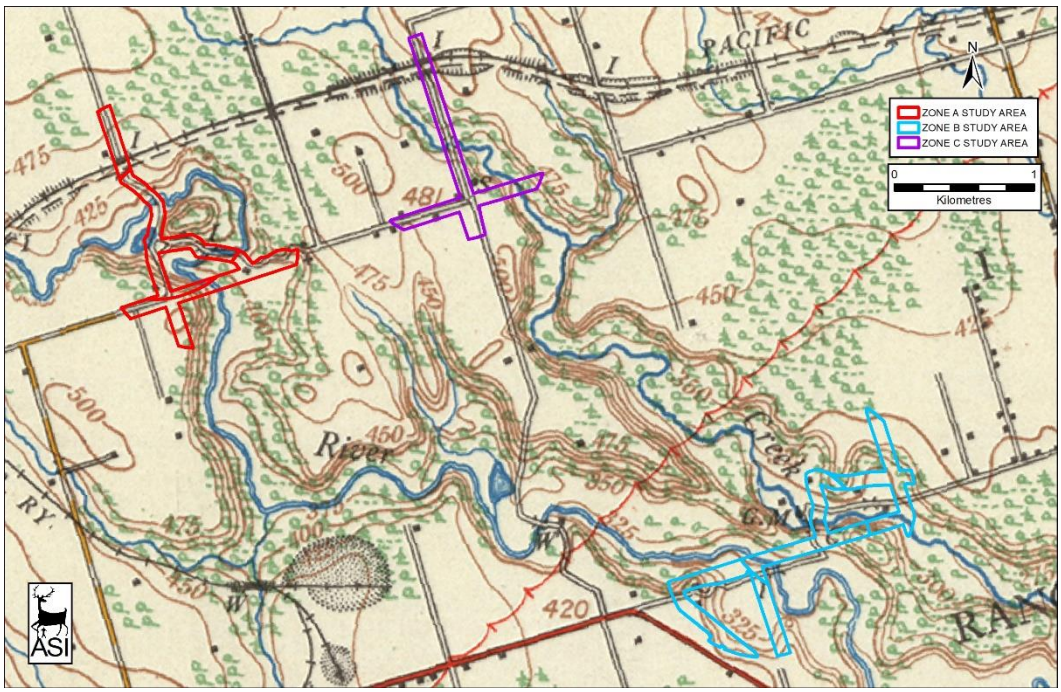


Figure 5: The study area overlaid on the 1936 Markham topographic map
Base Map: (Department of National Defence, 1936)

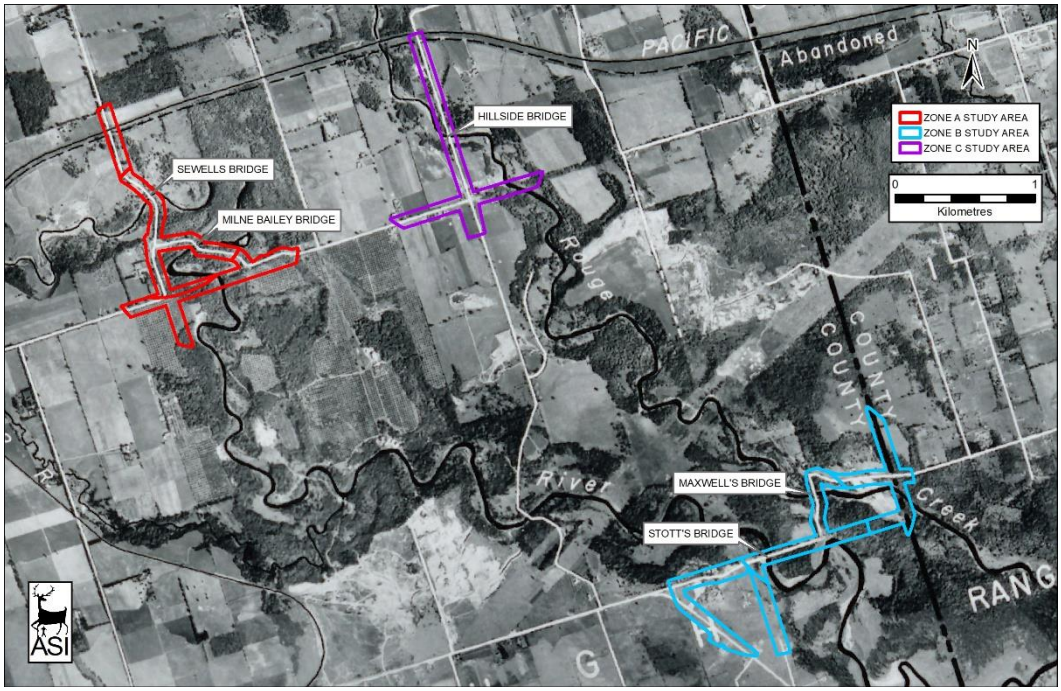


Figure 6: The study area overlaid on merged 1954 aerial photograph
Base Map: (Hunting Survey Corporation Limited, 1954)

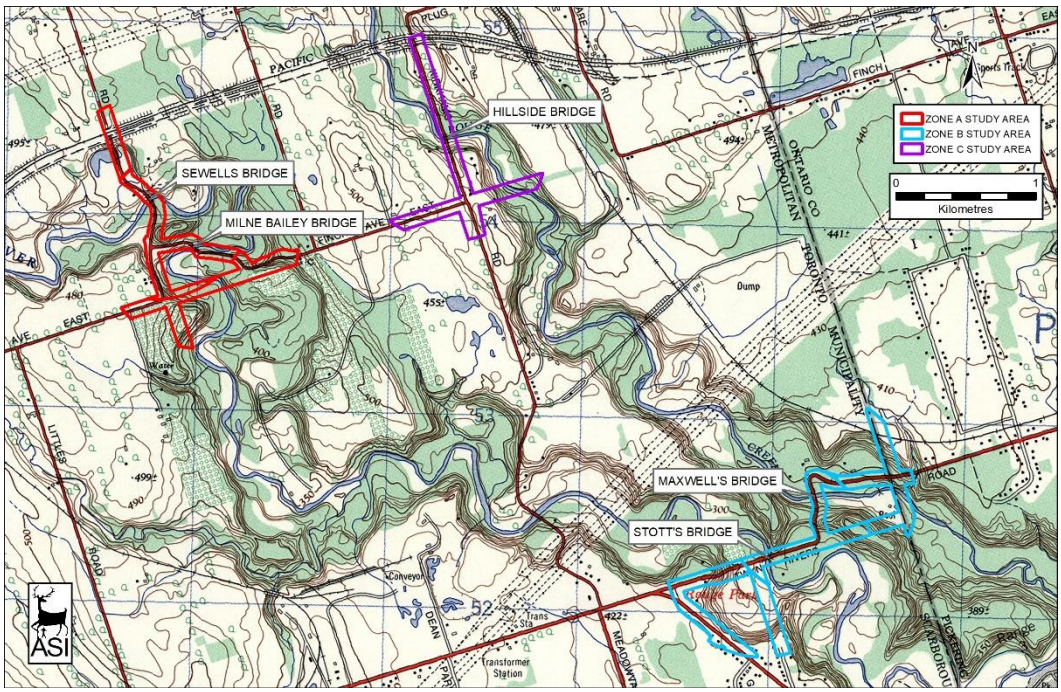


Figure 7: The study area overlaid on the 1974 Highland Creek topographic map
Base Map: (Department of Energy, Mines and Resources, 1974)

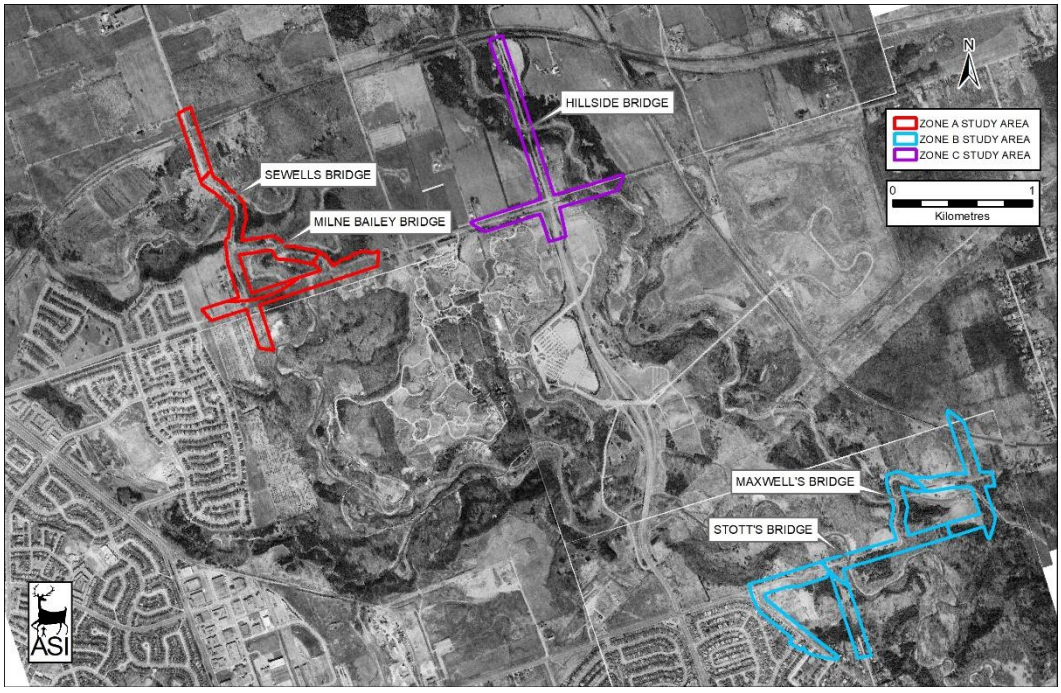


Figure 8: The study area overlaid on merged 1992 aerial photographs
Base Map: (City of Toronto Archives, n.d.)

4.0 EXISTING CONDITIONS

4.1 Description of Field Review

A field review of the three zones of the study area was undertaken on 5 October 2020, by John Sleath of ASI, to document the existing conditions of each zone from existing rights-of-way. The existing conditions are described below and six photographs are provided for each zone (Plate 1 to Plate 18). Identified CHRs are discussed in Section 4.2 and are mapped in Figure 9 of this report.

4.1.1 Zone A

Accessible portions of Zone A includes portions of Sewells Road and Old Finch Avenue, both two-lane roads set in a rural environment.[5] Old Finch Avenue west of Sewells Road is in a mixed agricultural and forested context (Plate 1). Sewells Road between Old Finch Avenue and the CPR line is largely wooded on both the east and west sides. The approaches to the Sewell's Bridge are on a winding stretch of road (Plate 2 to Plate 4). Old Finch Avenue east of Sewells Road is also a winding stretch of road with dense woods on both sides of road. Hiking trails meander through the woods, with access immediately south of the Milne Bailey Bridge (Plate 5 to Plate 6).

Plate 1: Old Finch Avenue, looking west from the corner of Sewells Road and Old Finch Avenue

Plate 2: Sewells Road, looking north toward the railway bridge

[5] Zone A also includes an area between the non-continuous sections of Old Finch Avenue along the former concession line and an area south of where Sewells Road currently ends. These two sections were inaccessible for the purposes of fieldwork.

Plate 3: Sewells Road, looking southeast toward Sewell's Bridge

Plate 4: Sewells Road, looking north from north of Old Finch Avenue

Plate 5: Old Finch Avenue, looking east from east of the Milne Bailey Bridge

Plate 6: Old Finch Avenue, looking west from west of Reesor Road

4.1.2 Zone B

Accessible portions of Zone B includes a stretch of Sheppard Avenue East from where it curves from an east-west trajectory to a southeast-northwest trajectory and Twyn Rivers Drive east of Sheppard Avenue East until the border with the City of Pickering.[6] Sheppard Avenue East is a four-lane road that has suburban development on the southwest side and a mix of trees and open spaces on the northeast side. A walking trail runs adjacent to the road on the northeast side (Plate 7). Twyn Rivers Drive is a two-lane road with dense forest on both sides. The road has several rolling hills and winding curves including east and west of Stott's Bridge (Plate 8 and Plate 9) and north and south of Maxwell's Bridge (Plate 10 and Plate 11). More forested areas – with hiking trails running through them – border the road near the eastern terminus of this zone, near the border with the City of Pickering (Plate 12).

[6] Zone B also includes three sections that were inaccessible for the purposes of fieldwork. The first is an area between Twyn Rivers Drive and the northern terminus of Boydwood Lane. The second is an area along the former concession line that is west of the portion of Twyn Rivers Drive that runs in a north-south direction. The third is an area north and south of Twyn Rivers Drive at the eastern terminus of the study area.

Plate 7: Sheppard Avenue East, looking northwest from Rainbow Ridge Avenue

Plate 8: Twyn Rivers Drive, looking east toward Stott's Bridge

Plate 9: Twyn Rivers Drive, looking west from west of Stott's Bridge

Plate 10: Twyn Rivers Drive, looking west from the 90 degree turn in the road east of Stott's Bridge

Plate 11: Twyn Rivers Drive, looking west from the Twyn Rivers Area parking lot

Plate 12: Twyn Rivers Drive, looking west from the Toronto-Pickering border

4.1.3 Zone C

Zone C includes the eastern terminus of Old Finch Avenue and the stretch of Meadowvale Road from the CPR in the north to approximately 175 metres south of the intersection with Old Finch Avenue. Old Finch Avenue is a two-lane road with a mix of agricultural land and wooded areas on the north and the Toronto Zoo on the south (Plate 13). Meadowvale Road south of Old Finch Avenue is a four-lane road with trees lining both east and west sides (Plate 14). The four-way intersection of Meadowvale Road and Old Finch Avenue is marked by stop signs (Plate 15). The short stretch of Old Finch Avenue east of Meadowvale Road provides access to the parking lot for Hillside School and to a long private driveway (Plate 16). Meadowvale Road north of Old Finch Avenue is a rural two-lane stretch (though reduced to one lane on the Hillside Bridge) with a mix of large open land and dense forest (Plate 17 and Plate 18).

Plate 13: Old Finch Avenue, looking west from west of Meadowvale Road

Plate 14: Meadowvale Road, looking south from the intersection with Old Finch Avenue

Plate 15: Intersection of Old Finch Avenue and Meadowvale Road, looking northeast

Plate 16: Driveway (extension of Old Finch Avenue), east of Meadowvale Road, looking east

Plate 17: Meadowvale Road, looking north from north of the Hillside Bridge

Plate 18: Meadowvale Road, looking south from south of the railway tracks

4.2 Identified Cultural Heritage Resources

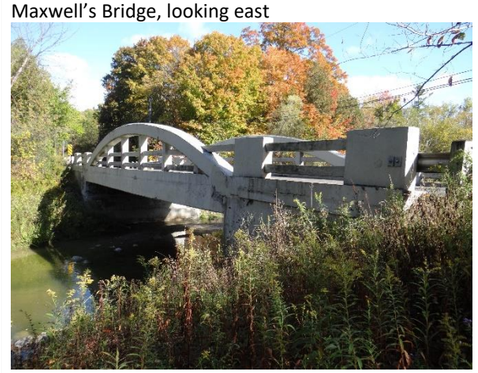
Based on the results of the background research and field review, sixteen cultural heritage resources[7] including 11 built heritage resources (BHRs) and five cultural heritage landscapes (CHLs) were identified within and/or adjacent to the Rouge Park Bridges Transportation Master Plan study area. Eleven of these sites were previously identified: four were found in Zone A, two were found in Zone B, and five were found in Zone C. Further, five cultural heritage resources were identified during the field review: two were found in Zone A, two were found in Zone B, and one was found in Zone C (Figure 9). A cultural heritage resource number has been assigned to each resource (CHR #). A detailed inventory of these cultural heritage resources is presented in Table 2 and mapping of these features are provided in Figure 9.

[7] For the purpose of this assessment, the term 'cultural heritage resource' is used to describe both cultural heritage landscapes and built heritage resources (see Section 2.3 for definitions).

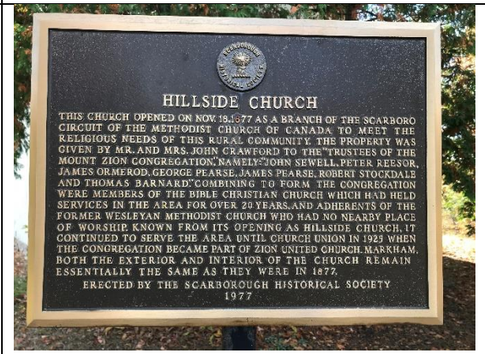
Table 2: Inventory of Known and Potential Built Heritage Resources and Cultural Heritage Landscapes within the Study Area

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHR-1 (BHR)	Bridge	Sewell's Bridge Sewells Road (north of Old Finch Avenue), crossing the Rouge River	Known BHR – Designated under Part IV of the Ontario Heritage Act (By-law No. 25155)	Sewell's Bridge is located on Sewells Road, north of Old Finch Avenue in the former Township of Scarborough, now the City of Toronto. The bridge is owned by the City of Toronto, but the surrounding area is federally-owned lands within the RNUP. Sewell's Bridge is a three-span suspension bridge and the deck is 49.2 m long and 4.2 m wide. It was designed by Frank Barber and built in 1912. The bridge carries a single lane of predominantly vehicular traffic over the Rouge River (A.S.I., 2022). The following is an excerpt from the *Reasons for the Designation of the Sewells Bridge* in By-law No. 25155. For the full by-law text see Appendix A. The Sewells Bridge is [designated] for historical and engineering reasons. The bridge, built in 1912, is technically described as a "stiffened suspension bridge". In 1911, Frank Barber, C.E. was commissioned to design a bridge to replace an old timber crossing. The Sewell Family occupied large farms in Lot 8 and 9. The road leading past their farms became known as Sewells Road and the bridge likewise became known as the Sewells Road Bridge. Besides being one of the oldest bridges in Scarborough, the bridge is believed to be the only remaining suspension bridge on a public road in Ontario (Corporation of the City of Scarborough, 1997d).	 Sewell's Bridge, looking northwest  Sewell's Bridge, looking west
CHR-2 (BHR)	Bridge	Milne Bailey Bridge	Known BHR – Listed on Municipal Heritage Register	The following is the Draft Statement of Cultural Heritage Value or Interest prepared by ASI as part of the concurrent HIA for the Milne Bridge (A.S.I., 2022). ***Description of Property*** *Name:* Milne Bailey Bridge *Alternate Names*: Finch Meander Bridge, Old Finch Bailey Bridge The Milne Bailey Bridge is located on Old Finch Avenue, east of Sewells Road in the former Township of Scarborough, now the City of Toronto. The bridge is owned by the City of Toronto, but the surrounding area is federally-owned lands within the Rouge National Urban Park (RNUP). The Milne Bailey Bridge is two spans and the deck is 57.90 m long and 5.47 m wide. The bridge carries a single lane of predominantly vehicular traffic over the Rouge River. It was constructed in 1988 as a replacement to an earlier Bailey Bridge in this location (constructed in 1954) and retains the central pier from the 1954 bridge. ***Cultural Heritage Value or Interest***	 Milne Bailey Bridge, looking northeast

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
				The Milne Bailey Bridge was built by Ellis Engineering in 1988. It is, at a minimum, the third crossing at this location. The first definitive crossing was an iron bridge that was built at some point before 1914 but was destroyed by Hurricane Hazel in 1954. A second crossing was the first Milne Bailey Bridge which was constructed by the Second Field Engineer Regiment of the Canadian Military Engineers in 1954. The bridge is located on property formerly owned by William A. Milne, a prominent saw mill owner and operator in the area. This bridge may be considered representative of the Bailey design, which emerged in the 1940s as a temporary military bridge type that was used by the Allies during the Second World War because they were prefabricated and portable. In the postwar period, Bailey bridges were often erected where the need was for a relatively quick and easy construction, without requiring specialized tools or equipment. The subject bridge is also considered a rare example of a Bailey bridge on a municipal roadway in the City of Toronto. The subject bridge crossing has historical and associative value due to its association with a significant event – Hurricane Hazel – that is significant to the City of Toronto. The crossing location retains the concrete abutments from a previous structure and the central pier of the 1954 structure, which have direct associations with Hurricane Hazel and the First Milne Bailey Bridge. The subject bridge also retains contextual value as it supports the scenic riverine character of Old Finch Avenue through the RNUP, retains physical, functional, and visual links to its surroundings, and is a landmark to local motorists. The Milne Bailey Bridge is a single-lane two-span bridge. It is situated along a historic transportation route in a rural setting over the Rouge River. As the last surviving example of this bridge type in Scarborough, and a representative example of a Bailey bridge, this structure contributes to the understanding of bridge construction and transportation developments in the Greater Toronto Area. ***Heritage Attributes*** Key heritage attributes that embody the heritage value of this bridge crossing in the local context include: • Bailey construction and design; • Steel trusses, arches, stringers, and deck grating; • Wood pier from 1954 Bailey Bridge; • Cast-in-place concrete abutments from former bridge at the crossing; • Single-lane construction; and • Scenic view of the Rouge River Valley.	 Milne Bailey Bridge, looking north across the deck
CHR-3 (BHR)	Bridge	Maxwell's Bridge	Known BHR – Designated Part IV under OHA (By-law No. 25152)	Maxwell's Bridge is located on Twyn Rivers Drive in the former Township of Scarborough, now the City of Toronto. The bridge is owned by the City of Toronto, but the surrounding area is federally-owned lands within the RNUP. Maxwell's Bridge is a single-span reinforced concrete, bowstring arch bridge and the deck is 20.9 m long and 7.52 m wide. It was constructed in 1927 and carries two lanes of predominantly vehicular traffic over the Little Rouge Creek (A.S.I., 2022). The following is an excerpt from the *Reasons for the Designation of the Maxwell's Bridge* in By-law No. 25152. For the full by-law text see Appendix A. "The Maxwell Bridge is [designated] for historical and structural reasons. The bridge, built in 1927, is [a] reinforced concrete, bowstring arch "through" structure, of a type pioneered in Canada by Frank Barber C.E. in the early 1900's. The bridge name was once associated with Maxwell's Mill which was located just north of the bridge structure. It was built to replace earlier access roads to the saw and grist mills and a woollen factory on the Rouge. Few of these bridge types remain in Ontario and the Maxwell Bridge	

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
				was one of the last of this type to be constructed in the province" (Corporation of the City of Scarborough, 1997a).	Maxwell's Bridge, looking east  Maxwell's Bridge, looking southwest
CHR-4 (BHR)	Bridge	Stott's Bridge	Known BHR – Designated Part IV under OHA (By-law No. 25154)	Stott's Bridge is located on Twyn Rivers Drive in the former Township of Scarborough, now the City of Toronto. The bridge is owned by the City of Toronto, but the surrounding area is federally-owned lands within the RNUP. Stott's bridge is a single-span Pony Warren Truss bridge and the deck is 22.4 m long and 4.28 m wide. It was constructed in 1915 and carries a single lane of predominantly vehicular traffic over the Rouge River (A.S.I., 2022). The following is an excerpt from the *Reasons for the Designation of the Stott's Bridge* in By-law No. 25154. For the full by-law text see Appendix A. "The Stotts Bridge is [designated] for historical and structural reasons. The bridge, built in 1915, is technically described as a Pony Warren Truss Bridge. Pony Warren Truss bridges do not require cross bracing, thereby eliminating height restrictions. The bridge's name was once associated with William Stotts' family who owned adjacent property and did repair work on the steep hill road which approaches the bridge from the west" (Corporation of the City of Scarborough, 1997c).	 Stott's Bridge, looking west across the deck  Stott's Bridge, looking southwest

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHR-5 (BHR)	Bridge	Hillside Bridge	Known BHR – Designated Part IV under OHA (By-law No. 25153)	Hillside Bridge is located on Meadowvale Road in the former Township of Scarborough, now the City of Toronto. The bridge is owned by the City of Toronto, but the surrounding area is federally-owned lands within the RNUP. Hillside Bridge is a single-span Pony Warren Truss bridge and the deck is 25.6 m long and 5.14 m wide. It was constructed in 1917 and carries a single lane of predominantly vehicular traffic over the Little Rouge Creek (A.S.I., 2022).. The following is an excerpt from the *Reasons for the Designation of the Hillside Bridge* in By-law No. 25153. For the full by-law text see Appendix A. "The Hillside Bridge is [designated] for historical and engineering reasons. The bridge, built in 1917, is technically described as a Pony Warren Truss Bridge similar in design to the Stotts bridge. The structure does not require cross bracing, thereby eliminating height restrictions. The bridge was designed to carry local traffic across the Little Rouge in a rural environmental setting. It continues to serve this purpose today as this area of Scarborough forms part of the Rouge Valley Park. It is important that this bridge be preserved for future generations to understand and appreciate our rural heritage" (Corporation of the City of Scarborough, 1997b).	 Hillside Bridge, looking west  Hillside Bridge, looking south across the deck
CHR 6 (CHL)	Church and cemetery	Hillside Methodist Church and Cemetery 361 Old Finch Avenue	Known BHR – Designated Part IV under OHA (By-law No. 18296)	The church was constructed in 1877, though it does not appear on the 1878 map. Early worshippers included prominent Hillside residents such as members of the Sewell, Reesor, Beare, and Pearse families. Associated cemetery includes graves of prominent Hillside residents. The Gothic style board and batten church with arched windows reflects late nineteenth-century religious architecture and the interior and exterior remain essentially as they were in 1877. A plaque stands in front of the church providing a historical synopsis. The Hillside Methodist Church has known architectural and historical value or interest. The following is an excerpt from the *Reasons for the designation of "Hillside Methodist Church" on the south side of Finch Avenue west of Meadowvale Road.* in By-law No. 18296. For the full by-law text see Appendix A. "Hillside Methodist Church": This church is recommended for designation for both historical and architectural reasons. It was built by the parishioners in the small rural community of Hillside in 1877 and is an example of a Gothic style board and batten building.	 Hillside Methodist Church and cemetery, looking south from Old Finch Avenue

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
					 Plaque for Hillside Church, located in front of the church behind the white fence
CHR 7 (CHL)	Former farmscape	Milne House and Ice House,264 Old Finch Avenue	Known BHR – Designated Part IV under OHA (By-law No. 19831)	Nineteenth-century mapping indicates the property was owned by William A. Milne, known as a prominent mill owner (Figure 2 and Figure 3). Constructed in 1871 it is known as “Valley View” and/or “Hillside.” The house is predominantly of board and batten on a fieldstone foundation and is representative of vernacular Ontario farmhouse architecture with elements of Gothic style. The property features a red brick ice house to the north. The property is located at corner of Old Finch Avenue and Sewells Road, two important nineteenth-century roadways The property has known architectural value. The following is an excerpt from By-law No. 19831. For the full by-law text see Appendix A. The Milne House is recommended for architectural reasons as the only Frame Gothic style house structure in Scarborough. The building is of predominantly board and batten constructions on a fieldstone foundation. An added feature of the house complex is a red brick smokehouse to the north of the main house.	 Milne House, looking north from Old Finch Avenue
CHR 8 (BHR)	School	Hillside Public School 2259 Meadowvale Road	Known BHR – Designated Part IV under OHA (By-law No. 037-1999)	Nineteenth-century mapping indicates the property was owned by P. Boyour (1860) and Jno. Diller (1878) (Figure 2 and Figure 3). Constructed in 1872 as a board and batten, frame structure, it was later moved west onto cut field stone foundations and bricked over in 1904. Many additions and alterations have occurred over the last century. A plaque stands in front of the school titled “Hillside Public School S.S. No. 4”. The property is located at intersection of Old Finch Avenue and Meadowvale Road, two important nineteenth-century roadways The property has known historical value as a late-nineteenth century educational facility. The following is an excerpt from By-law No. 037-1999. For the full by-law text see Appendix A. Hillside Public School (S.S. #4) is recommended for designation primarily for historical reasons. Originally built in 1872 as a board and batten, frame structure, it was moved several metres west onto a cut field stone foundations and bricked over in 1904… The school is recommended for designation primarily for its historical context, being the oldest school building in Scarborough still used for educational purposes, and as a landmark on the north-east corner of the rural crossroad community which became known as part of Hillside.	 Hillside School, looking east

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHR 9 (BHR)	Barn	Sam Pearse Barn 366 Old Finch Avenue	Known BHR – Listed on the City of Toronto Heritage Register	Nineteenth-century mapping indicates the property was owned by G. Pearse (1860) and Mrs. Pearse (1878) (Figure 2 and Figure 3). The barn was constructed in early twentieth century by Sam Pearse, a descendant of the nineteenth-century owners. The barn is a representative example of an Ontario barn with wood siding on stone foundation. The property is located on Old Finch Avenue, an important nineteenth and twentieth-century roadway. The property has known historical value as an early twentieth century barn[8]. Key heritage attributes that may embody the heritage value of this structure include: • Scale and massing • Gambrel roof • Vertical board cladding • Fieldstone foundation	 Sam Pearse Barn, looking north
CHR 10 (BHR)	Residence	Parker-Cavanaugh House 364 Old Finch Avenue	Known BHR – Listed on the City of Toronto Heritage Register	Nineteenth-century mapping indicates the property was owned by K. Parker (1860) and Rueben Stevens (1878) (Figure 2 and Figure 3). The farmhouse was constructed c. 1870s with a driveway out to Reesor Road illustrated on the property on 1878 mapping (Figure 3) and driveway out to Old Finch Avenue illustrated on the property in 1936 mapping (Figure 5). The house is a one-and-a-half storey side gable construction with later additions on a large property with barns to the southwest of the residence. Based on a review of aerial imagery, these outbuildings are not visible on the property. As the residence is setback approximately 275 metres from Reesor Road, it is not visible from the public right-of-way. The property is located on Old Finch Avenue, an important nineteenth and twentieth-century roadway. The property has known historical value as a late nineteenth or early twentieth-century farmhouse[9]. Key heritage attributes that may embody the heritage value of this structure include: • One-and-a-half storey residence	 Parker-Cavanaugh House, looking north (Architectural Conservancy of Ontario)

[8] An evaluation of this property against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential built heritage resource.

[9] An evaluation of this property against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential built heritage resource.

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHR 11 (CHL)	Farmscape	Diller-Pearse House, 2271 Meadowvale Road	Known BHR – Listed on the City of Toronto Heritage Register	Nineteenth-century mapping indicates the property was owned by P. Boyour (1860) and Jno. Diller (1878) (Figure 2 and Figure 3). The farmhouse was constructed between 1861 and 1878 since it appears on 1878 mapping (Figure 3). A long driveway was formerly connected with Plug Hat Road, but was likely cut off by construction of the CPR, forcing the driveway west to Meadowvale Road. Based on a review of aerial imagery, several outbuildings are associated with the residence on the property, all of which are connected by a long internal driveway. As the residence is setback approximately 150 metres metres from Meadowvale Road behind dense tree cover, no structures on the property are visible from the public right-of-way. The house is associated with two prominent local families, the Diller and Pearse families. The property is located along Meadowvale Road, an important nineteenth and twentieth-century roadway. The property has known historical value as a late nineteenth-century farmhouse[10]. Key heritage attributes that may embody the heritage value of this farmscape include: • Residence • Outbuildings • Circulation routes • Mature vegetation	 Driveway to Diller-Pearse House, looking east
CHR 12 (BHR)	Bridge abutments	Bridge abutments to Canadian Northern Railway along Sewells Road	Potential BHR/CHL – Identified during field review/desktop research	Nineteenth century mapping indicates the property was owned by William A. Milne, a prominent saw mill owner and operator (Figure 2 and Figure 3). The railway bridge across Sewells Road was erected between 1914 and 1922 and is evident on a 1922 topographic map. Competition with the GTR and the CPR led to the CNoR's bankruptcy in 1918 and incorporation by the Canadian National Railways in 1923. Duplicate rail lines were eliminated where they existed, and the 1936 topographic map (Figure 5) shows that the railway line and subject bridge had been abandoned. This property has potential to retain historical and contextual value as an early twentieth century railway structure[11]. Key heritage attributes that may embody the heritage value of this structure include: • Cast-in-place concrete abutments on Sewells Road • Association with the Canadian Northern Railway alignment	 Former CNoR bridge abutments, with CPR bridge in behind, looking north

[10] An evaluation of this property against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential built heritage resource.

[11] An evaluation of this structure against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential built heritage resource.

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
					 Close up of former CNoR bridge abutments, with CPR bridge in behind, looking north
CHR 13 (CHL)	Streetscape	Old Finch/Sewells Road roadscapes in Zone A	Potential BHR/CHL – Identified during field review/desktop research	Nineteenth century mapping indicates the formation of the extant road alignment by 1878 (Figure 3). The road alignment is non-linear, meandering, and bound by local topography which is irregular in this region. The road alignment allowed access to historic Milne Mill on Rouge River. The roadways provide scenic views of the surrounding area, including the Rouge Urban National Park and the Rouge River. Sections of both roadways are winding with changes in elevation and topography. Old Finch Avenue and Sewells Road are both historically surveyed and considered to be two important nineteenth century roadways. These roadways have potential to retain historical and contextual value[12]. Key heritage attributes that may embody the heritage value of this streetscape include: • Meandering, non-linear alignment • Elevation changes based on local topographical variation • Scenic views of the Rouge River and surrounding treed valley	 Old Finch Avenue, looking west from west of Reesor Road  Sewells Road, looking north toward Sewell's Bridge

[12] An evaluation of this roadscape against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential cultural heritage landscape.

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
CHR 14 (CHL)	Streetscape	Twyn Rivers Road roadscape in Zone B	Potential BHR/CHL – Identified during field review/desktop research	Historical mapping indicates the formation of the extant road alignment prior to 1914 (Figure 3). The road alignment is non-linear, meandering, and bound by local topography which is irregular in this region. The road alignment allowed access across Rouge River and Little Rouge Creek and to the mills of the Rouge Valley, and provide scenic views of the surrounding area. Sections of the roadway are winding with changes in elevation and topography. This roadway has potential to retain historical and contextual value[13]. Key heritage attributes that may embody the heritage value of this streetscape include: • Meandering, non-linear alignment • Elevation changes based on local topographical variation • Scenic views of the Rouge River and Little Rouge Creek and surrounding treed valleys	 Twyn Rivers Drive, looking east  Twyn Rivers Drive, looking west
CHR 15 (BHR)	Remnant mill	Ruins of old Maxwell Mills Twyn Rivers Road, close to Orchard Trail	Potential BHR/CHL – Identified during field	Nineteenth century mapping indicates the property was owned by James Maxwell, a prominent saw mill owner and operator (Figure 2 and Figure 3). Maxwell started the mill in 1840, but a large flood destroyed the mill dam in 1929. It was one of the last operational mills in the Rouge valley, until it was converted to house livestock for Clarence Purcell's hobby farm. It was later used for a storage space until a fire burned it down in the 1970s. The stone pillars and remnant foundation walls remain extant	 Maxwell's Mills ruins

[13] An evaluation of this roadscape against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential cultural heritage landscape.

Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
			review/desktop research[14]	This property has potential to retain historical value[15]. Key heritage attributes that may embody the heritage value of this remnant mill include: • Stone foundation ruins • Arrangement of ruins indicating location of former structures • Location adjacent to the Rouge River	 Maxwell's Mills ruin
CHR 16 (BHR)	Residence	George Pearse House 2262 Meadowvale Road	Identified during field review	Nineteenth-century mapping indicates the property was owned by George Pearce (1860) and Mrs. Pearce (1878) (Figure 2 and Figure 3). The residence was constructed c. 1852 as residence for George Pearse, a prominent Hillside resident. The residence is an early settler dwelling with board-and-batten cladding and a small rectangular layout. The property is located at the crossroads of Old Finch Avenue and Meadowvale Road, two important nineteenth and twentieth-century roadways. This property has potential to retain historical and contextual value[16]. Key heritage attributes that may embody the heritage value of this residence include: • Single-storey scale and rectangular massing • Board and batten cladding • Association with George Pearse, a prominent Hillside resident	 George Pearse House in 2003, looking northeast (City of Toronto Staff Report, 2003)

[14] The Rouge National Urban Park section on Parks Canada's website posits that Maxwell's Ruins was added to the City of Toronto Inventory of Heritage Properties in 2009. However, this may be inaccurate. Maxwell's Ruins was nominated for inclusion on the City of Toronto Heritage Register by the Scarborough Community Heritage Preservation Panel in 2009, but as of 2017, it was still neither listed nor designated by the city. Parks Canada now oversees the site and have not included it on the Canadian Register of Historic Places.

[15] An evaluation of this property against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential cultural heritage resource.

[16] An evaluation of this property against criteria outlined in Ontario Regulation 9/06 is required to identify any formal cultural heritage value or interest or attributes associated with this potential cultural heritage resource.

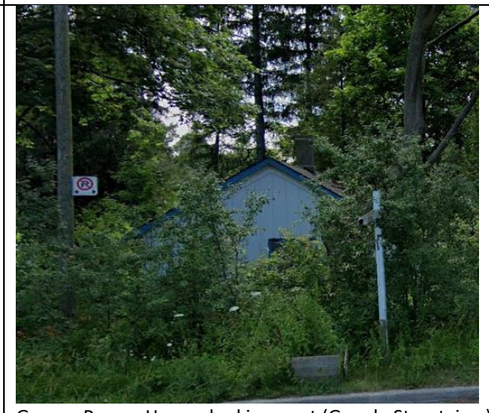
Feature ID/ Type	Type of Property	Address or Location	Heritage Status and Recognition	Description of Property and Known or Potential CHVI	Photographs/ Digital Image
					 George Pearse House, looking west (Google Streetview)

Figure 9: Location of Potential Cultural Heritage Resources and Photographic Plates in the Rouge Park Bridges Transportation Master Plan

5.0 PRELIMINARY IMPACT ASSESSMENT

5.1 Description of Proposed Undertaking

The proposed undertaking for the Rouge Park Bridges Transportation Master Plan (TMP) study area consists of retaining, through maintenance and repairs, Sewell's Bridge and Maxwell's Bridge; replacing Milne's Bridge, Hillside Bridge, and Stott's Bridge; and lowering the road by approximate 0.6 metres at the CP Rail Bridges over Meadowvale Road and Sewell's Road. While the preliminary preferred options have been recommended, no preliminary designs have been prepared for the Rouge Bridges TMP. As such, potential impacts to identified BHRs and CHLs outlined in Section 4.2 should be reassessed during preliminary design phase of the subsequent Municipal Class Environmental Assessment project that is anticipated to follow the TMP.

5.2 Analysis of Potential Impacts

Table 3 outlines the potential impacts on all identified BHRs and CHLs within the study area.

Table 3: Preliminary Impact Assessment and Recommended Mitigation Measures

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHR 1 (BHR)	Sewell's Bridge Designated Part IV under OHA (By-law No. 25155)	The description of the preferred alternative for this structure in the TMP is as follows: Retain - Would involve keeping the bridge essentially in its current condition for the retention period, at which time a re-evaluation would be undertaken. Maintenance repairs would be conducted. Following repairs, a monitoring and maintenance program would be required to extend the service life until rehabilitation or replacement. (Dillon Consulting Limited, 2022). Direct impacts to Sewell's Bridge are anticipated in the preferred alternative. Potential direct impacts include alterations to physical elements of the bridge with their rehabilitation or replacement. Indirect impacts due to construction-related activities are also anticipated.	Heritage Impact Assessment (HIA) that provides a detailed description of potential impacts and outlines appropriate mitigation measures is being concurrently prepared by ASI.
CHR 2 (BHR)	Milne Bailey Bridge Listed on the City of Toronto Heritage Register	The description of the preferred alternative for this structure in the TMP is as follows: Replace - Would involve constructing a new panel bridge at the same location, and removing the existing bridge. The new bridge may be longer and higher than existing, to meet hydraulic requirements. (Dillon Consulting Limited, 2022). Direct impacts to Milne Bailey Bridge are anticipated in the preferred alternative. Direct adverse impacts to all physical elements of the bridge are anticipated with the complete removal and replacement of the structure. Indirect impacts to the subject crossing are also anticipated due to construction-related activities including soil disturbance and grading.	A HIA that provides a detailed description of potential impacts and outlines appropriate mitigation measures is being concurrently prepared by ASI.

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHR 3 (BHR)	Maxwell's Bridge Designated Part IV under OHA (By-law No. 25152)	The description of the preferred alternative for this structure in the TMP is as follows: Retain - Would involve keeping the bridge in its current condition for the retention period, at which time a re-evaluation would be undertaken. Maintenance repairs would be conducted. Following repairs, above-average maintenance is anticipated until the next assessment is conducted. (Dillon Consulting Limited, 2022). Direct impacts to Maxwell's Bridge are anticipated in the preferred alternative. Potential direct impacts include alterations to physical elements of the bridge with their rehabilitation or replacement. Indirect impacts due to construction-related activities are also anticipated.	A HIA that provides a detailed description of potential impacts and outlines appropriate mitigation measures is being concurrently prepared by ASI
CHR 4 (BHR)	Stott's Bridge Designated Part IV under OHA (By-law No. 25154)	The description of the preferred alternative for this structure in the TMP is as follows: Replace - Would involve constructing a new bridge at the same location, and removing the existing bridge. The new bridge would be longer and higher than existing, to meet hydraulic requirements. (Dillon Consulting Limited, 2022). Direct impacts to Stott's Bridge are anticipated in the preferred alternative. Direct adverse impacts to all physical elements of the bridge are anticipated with the complete removal and replacement of the structure. Indirect impacts to the subject crossing are also anticipated due to construction-related activities including soil disturbance and grading.	A HIA that provides a detailed description of potential impacts and outlines appropriate mitigation measures is being concurrently prepared by ASI
CHR 5 (BHR)	Hillside Bridge Designated Part IV under OHA	The description of the preferred alternative for this structure in the TMP is as follows: Replace – Would involve constructing a new panel bridge at the same location, and removing the existing bridge.	A HIA that provides a detailed description of potential impacts and outlines appropriate mitigation measures is being concurrently prepared by ASI

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
	(By-law No. 25153)	The new bridge may be longer and higher than existing, to meet hydraulic requirements. (Dillon Consulting Limited, 2022). Direct impacts to Hillside Bridge are anticipated in the preferred alternative. Direct adverse impacts to all physical elements of the bridge are anticipated with the complete removal and replacement of the structure. Indirect impacts to the subject crossing are also anticipated due to construction-related activities including soil disturbance and grading.	
CHR 6 (CHL)	Hillside Methodist Church and Cemetery 361 Old Finch Avenue Designated Part IV under OHA (By-law No. 18296)	It is understood that the limits of the proposed undertaking will be confined to Sewell's Bridge, the Milne Bailey Bridge and the existing Old Finch Avenue right of way. Construction-related activities are anticipated to be located approximately 500 metres from Hillside Methodist Church. No direct or indirect adverse impacts are anticipated.	No further work required as part of the Rouge Park Bridges TMP.
CHR 7 (CHL)	Milne House and Ice House 264 Old Finch Avenue Designated Part IV under OHA	It is understood that the limits of the proposed undertaking will be confined to Sewell's Bridge, the Milne Bailey Bridge and the existing Sewell's Road right of way. Construction-related activities are anticipated to be located approximately 500 metres from the residence on the subject property. No direct or indirect adverse impacts are anticipated.	No further work required as part of the Rouge Park Bridges TMP.

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
	(By-law No. 19831)		
CHR 8 (BHR)	Hillside School 2259 Meadowvale Road Designated Part IV under OHA (By-law No. 037-1999)	It is understood that the limits of the proposed undertaking will be confined to Hillside Bridge and the existing Old Finch Avenue and Meadowvale Road rights of way. Construction-related activities are anticipated to be located greater than 500 metres from the structure on the subject property. No direct or indirect adverse impacts are anticipated.	No further work required as part of the Rouge Park Bridges TMP.
CHR 9 (BHR)	Sam Pearse Barn 366 Old Finch Avenue Listed on the City of Toronto Heritage Register	It is understood that the limits of the proposed undertaking will be confined to Hillside Bridge and the existing Meadowvale Road right of way. The subject property is not adjacent to Meadowvale Road and the subject barn is located approximately one kilometre from the Hillside Bridge. No direct or indirect adverse impacts are anticipated.	No further work required.
CHR 10 (CHL)	Parker-Cavanaugh House 364 Old Finch Avenue Listed on the City of Toronto Heritage Register	It is understood that the limits of the proposed undertaking will be confined to Hillside Bridge and the existing Meadowvale Road right of way. The subject property is not adjacent to Meadowvale Road and the subject property is located approximately 800 metres from the Hillside Bridge. No direct or indirect adverse impacts are anticipated.	No further work required.

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
CHR 11 (CHL)	Diller-Pearse House 2271 Meadowvale Road Listed on the City of Toronto Heritage Register	It is understood that the limits of the proposed undertaking will be confined to Hillside Bridge, the CP rail bridge at Meadowvale Road and the existing Meadowvale Road right of way. As the residence on the property is greater than 500 metres from both the Hillside and CP bridges, subject bridge, no direct adverse impacts are anticipated. The subject property is adjacent to the CP bridge, and as such, indirect minor impacts due to construction and staging activities may be anticipated.	No further work required as part of the Rouge Park Bridges TMP. As construction-related activities such as grading and soil disturbance are anticipated to be adjacent to this CHL, a resource-specific HIA may be required during the *Environmental Assessment* phase of this project in accordance with the City of *Toronto's Official Plan* policies 3.1.5.5 and 3.1.5.23 (City of Toronto, 2019). As potential impacts are anticipated to be greater than 500 metres from the residence on the property and no significant heritage attributes on the property are anticipated to be impacted, it is recommended that the City of Toronto consider waiving the requirement for a HIA in this case in favour of suitable avoidance and mitigation measures. Heritage Planning at the City of Toronto should be consulted regarding the requirement for a HIA in this instance during the preparation of preliminary design. If required, this HIA should be prepared by a qualified cultural heritage professional based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments.*
CHR 12 (BHR)	Bridge abutments to Canadian Northern Railway along Sewells Road Sewells Road at the former CNoR alignment	Direct impacts to CHR 12 are anticipated to include excavation of the road between the former bridge abutments and exposure of foundations to lower the roadway approximately 60 centimetres under the structure. Lowering the road under the bridge is recommended in the TMP to allow passage of emergency services vehicles like firetrucks beneath the structure. Indirect impacts due to construction vibration are possible as CHR 12 sits within 50 metres of the proposed work.	If the proposed road lowering at CHR 12 is carried forward to preliminary design, a Cultural Heritage Evaluation Report (CHER) should be completed by a qualified heritage professional with recent and relevant experience to determine if CHR 12 retains cultural heritage value or interest (CHVI). If CHR 12 is determined to retain CHVI, a Heritage Impact Assessment (HIA) may be required as per section 3.1.5 of the *City of Toronto Official Plan* (City of Toronto, 2019). The HIA should be completed by a qualified heritage professional with recent and relevant experience as early in detailed design as

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
	Identified during field review		possible and be based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments.* Suitable mitigation measures may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR. To address the potential for indirect impacts due to construction related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts.
CHR 13 (CHL)	Old Finch/Sewells Road roadscapes in Zone A Identified during field review	Direct impacts to CHR 13 are anticipated to include the removal or trees and vegetation in the vicinity of the Milne Bailey Bridge. While the roadscape will be directly impacted, encroachment and construction activities are not anticipated to have direct or indirect adverse impacts to the potential CHVI of the roadscape as a whole.	The removal of mature trees and vegetation along the roadscape should be limited to the extent feasible. Where removals are required, post-construction rehabilitation with sympathetic plantings should be implemented.
CHR 14 (CHL)	Twyn Rivers Road roadscape in Zone B Identified during field review	Direct impacts to CHR 14 are anticipated to include the removal or trees and vegetation in the vicinity of Stott's Bridge. While the roadscape will be directly impacted, encroachment and construction activities are not anticipated to have direct or indirect adverse impacts to the potential CHVI of the roadscape as a whole.	The removal of mature trees and vegetation along the roadscape should be limited to the extent feasible. Where removals are required, post-construction rehabilitation with sympathetic plantings should be implemented.
CHR 15 (BHR)	Ruins of old Maxwell Mills Twyn Rivers Road, close to Orchard Trail	It is understood that the limits of the proposed undertaking will be confined to Maxwell's Bridge, Stott's Bridge, and the existing Twyn Rivers Drive right of way. No direct adverse impacts to CHR 15 are anticipated. As the proposed rehabilitation of Maxwell's Bridge is located approximately 180 metres from the mill ruins and	No further work required as part of the Rouge Park Bridges TMP. If any construction or staging is determined to be required within 50 metres of CHR 15 during preparation of preliminary design during the *Environmental Assessment* phase of this project, suitable mitigation measures should be employed.

Feature ID	Location/Name	Type and Description of Potential/Anticipated Impact	Mitigation Strategies
	Identified during field review	construction works are anticipated to be confined to the existing Twyn Rivers Drive right-of-way, no indirect impacts are anticipated due to construction related vibrations. However, if construction or staging is required within 50 metres of CHR 15, there is potential for vibrations to negatively impact the ruins.	Suitable mitigation measures could include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR if work is anticipated within 50 metres. To address the potential for indirect impacts due to construction related vibration, undertake a baseline vibration assessment during detail design to determine potential vibration impacts.
CHR 16 (BHR)	George Pearse House 2262 Meadowvale Road Identified during field review	It is understood that the limits of the proposed undertaking will be confined to Hillside Bridge and the existing Old Finch Avenue and Meadowvale Road rights of way. Construction-related activities are anticipated to be located greater than 500 metres from the structure on the subject property. No direct or indirect adverse impacts are anticipated.	No further work required as part of the Rouge Park Bridges TMP.

Direct impacts are anticipated to CHRs 1-5. Impacts to CHRs 1 and 3 will involve maintenance and repairs to the structures. CHRs 2, 4, and 5, will be demolished and replaced with new structures at the same location. As these five bridges are all included in the City of Toronto Heritage Register and there are direct impacts anticipated, a resource specific HIA is required for each bridge. A HIA for these bridges is being completed concurrently with this Cultural Heritage Report by ASI that will fulfill this requirement.

Indirect impacts to CHR 11 (Diller-Pearse House at 2271 Meadowvale Road) are possible as a result of the proposed lowering of Meadowvale Road under the rail corridor adjacent to the subject property. If lowering Meadowvale Road is carried forward to preliminary design, a resource-specific HIA may be required during the *Environmental Assessment* phase of this project in accordance with the City of *Toronto's Official Plan* policies 3.1.5.5 and 3.1.5.23 (City of Toronto, 2019). As potential impacts are anticipated to be greater than 500 metres from the residence on the property and no significant heritage attributes on the property are anticipated to be impacted, it is recommended that the City of Toronto consider waiving the requirement for a HIA in this case in favour of suitable avoidance and mitigation measures. Heritage Planning at the City of Toronto should be consulted regarding the requirement for a HIA in this instance during the preparation of preliminary design.

Direct impacts to CHR 12, including road excavation between the former bridge abutments and exposure of abutment foundations, may occur as a result of the lowering of Sewell's Road approximately 60 centimetres under the CP Rail bridge to allow passage of emergency services vehicles like firetrucks beneath the structure. A CHER should be conducted to determine Cultural Heritage Value or Interest (CHVI) of CHR 12. If CHR 12 is determined to have CHVI, a HIA should be completed based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments* by a qualified heritage professional with recent and relevant experience as early in detailed design as possible.

Indirect impact to CHR 12 may occur as a result of its location adjacent to proposed excavation work. To ensure the former rail bridge abutments are not adversely impacted during construction, baseline vibration monitoring should be undertaken during detailed design. Should this advance monitoring assessment conclude that the any structures will be subject to vibrations, a vibration monitoring plan should be prepared and implemented as part of the detailed design phase of the project to lessen vibration impacts related to construction. Suitable mitigation measures for CHR 12 may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR.

Direct impacts to mature trees and vegetation are also anticipated to CHR 13 and CHR 14, however this is not anticipated to have direct or indirect adverse impacts to the potential CHVI of the roadscape as a whole. Mitigation measures include limiting the removal of mature trees and vegetation where possible, and post-construction rehabilitation with sympathetic plantings should be considered and implemented where appropriate.

No direct or indirect impacts are anticipated for CHRs 6-11, 15, and 16 as a result of the recommendations from the Rouge Park Bridges TMP. Where the implementation of the recommendations of the TMP are anticipated to result in impacts during the preparation of preliminary design during the *Environmental Assessment* phase, additional heritage work may be required to mitigate impacts.

If any construction or staging is determined to be required within 50 metres of any identified BHR or CHL during preparation of preliminary design during the *Environmental Assessment* phase of this project, suitable mitigation measures should be employed. Suitable mitigation measures could include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR if work is anticipated within 50 metres. To address the potential for indirect impacts due to construction related vibrations, baseline vibration assessment should be completed during detail design to determine potential vibration impacts to identified BHRs and CHLs.

If direct or indirect adverse impacts are determined to be possible during the completion of preliminary design, a resource-specific HIA should be completed during the *Environmental Assessment* phase of this project. Heritage Planning at the City of Toronto should be consulted regarding the requirement for HIAs in this instance during the preparation of preliminary design.

If required, these HIAs should be prepared by a qualified cultural heritage professional based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments.*

6.0 CONCLUSIONS

The results of background historical research and a review of secondary source material, including historical mapping, indicate that all three zones of the study area have a rural land use history dating back to the mid-nineteenth century. A review of federal, provincial, and municipal registers, inventories, and databases revealed that there are eleven previously identified features of cultural heritage value within the three zones. Five additional features were identified during the fieldwork.

Key Findings

- A total of 16 cultural heritage resources including 11 BHRs and five CHLs were identified within and/or adjacent to the study area.

- Among the BHRs and CHLs identified within and/or adjacent to the study area are the following:
    - Seven properties or structures designated under Part IV of the *Ontario Heritage Act*
        - Four bridges (CHR # 1, 3, 4, and 5)
        - One school (CHR # 8)
        - One church (CHR # 6)
        - One residential property (CHR # 7)
    - Four properties or structures identified as Listed by the City of Toronto
        - Two residential properties (CHR # 10 and 11)
        - One bridge (CHR # 2)
        - One barn (CHR # 9)
    - Five potential BHRs or CHLs
        - Two roadscapes (CHR # 13 and 14)
        - Bridge abutments (CHR # 12)
        - Mill Ruins (CHR # 15)
        - Former residence (CHR # 16)

- Identified BHRs and CHLs are historically, architecturally, and contextually associated with the rural development in the Rouge River valley, in Hillside, and in the northern areas of the former Township of Scarborough. They are also representative of the development of Old Finch Avenue, Sewells Road, and Meadowvale Road as significant roadways in the nineteenth century and Twyn Rivers Drive as a significant roadway in the twentieth century.

Preliminary Impact Assessment

- Direct impacts are anticipated to five known built heritage resources (CHRs 1-5) and one potential built heritage resource (CHR 12), and two potential cultural heritage landscapes (CHRs 13 and 14).

- Direct impacts to CHRs 1-5 are being assessed concurrently in a HIA by ASI (A.S.I. (Archaeological Services Inc.), 2022)

- The bridge abutments to the former Canadian Northern Railway on Sewells Road should be evaluated for cultural heritage value or interest (CHVI) through the completion of a CHER. If it is found to have CHVI, a HIA should be completed to assess impacts and recommend appropriate mitigation measures. The CHER and HIA, if required, should be completed as early as possible during preliminary design during the Environmental Assessment phase of this project.

- Impacts to mature vegetation along the Old Finch/Sewells Road roadscapes (CHR 13) and Twyn Rivers Road roadscape (CHR 14) should be avoided where feasible, and post-construction rehabilitation with sympathetic plantings should be implemented where removals are planned.

7.0 RECOMMENDATIONS

Based on the results of the assessment, the following recommendations have been developed:

1. Construction activities and staging should be suitably planned and undertaken to avoid impacts to the identified cultural heritage resources.

2. Direct impacts are anticipated to Sewell's Bridge, Milne Bailey Bridge, Maxwell's Bridge, Stott's Bridge, and Hillside Bridge (CHRs 1-5). As these five bridges are all included in the City of Toronto Heritage Register and there are direct impacts anticipated, a resource specific HIA is required for each bridge. A HIA for these bridges is being completed concurrently with this Cultural Heritage Report by ASI that will fulfill this requirement.

3. Direct adverse impacts to CHR 12 (Bridge abutments to Canadian Northern Railway along Sewells Road) are anticipated to include excavation to the road between the abutments and exposure of the abutment foundations. A Cultural Heritage Evaluation Report (CHER) should be completed by a qualified heritage professional with recent and relevant experience during preliminary design in the *Environmental Assessment* phase to determine if CHR 12 has cultural heritage value or interest (CHVI). If CHR 12 is determined to retain CHVI, a Heritage Impact Assessment (HIA) may be required as per section 3.1.5 of the *City of Toronto Official*

Plan (City of Toronto, 2019). The HIA should be based on the *City of Toronto's Terms of Reference for Heritage Impact Assessments,* and be completed by a qualified heritage professional with recent and relevant experience as early in detailed design as possible. Suitable mitigation measures may also include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the CHR.

4. Direct impacts are anticipated to CHR 13 (Old Finch/Sewells Road roadscapes) and CHR 14 (Twyn Rivers Road roadscape), including the removal of mature trees and vegetation. However, while the roadscape will be directly impacted, encroachment and construction activities are not anticipated to have direct or indirect adverse impacts to the potential CHVI of the roadscape as a whole. Mitigation measures include limiting the removal of mature trees and vegetation along the roadscape, and where removals are required, post-construction rehabilitation with sympathetic plantings should be implemented.

5. Vibration during construction may impact CHR 12 (Bridge abutments to Canadian Northern Railway along Sewell's Road) as a result of its location in close proximity to excavation activities at the crossing. To ensure the structures are not adversely impacted, a baseline vibration assessment should be undertaken as early as possible during detailed design.

6. Where the implementation of the recommendations of the TMP are anticipated to result in impacts to built heritage resources and cultural heritage landscapes during the preparation of preliminary design during the *Environmental Assessment* phase, additional heritage work may be required to mitigate impacts.

7. If construction or staging is determined to be required within 50 metres of any identified BHR or CHL during preparation of preliminary design during the *Environmental Assessment* phase of this project, suitable mitigation measures should be employed. Suitable mitigation measures could include establishing no-go zones with fencing and issuing instructions to construction crews to avoid the BHR or CHL if work is anticipated within 50 metres. To address the potential for indirect impacts due to construction related vibrations, baseline vibration assessment should be completed during detail design to determine potential vibration impacts to identified BHRs and CHLs.

8. Should future work require an expansion of any of the three zones of the study area then a qualified heritage consultant should be contacted in order to confirm the impacts of the proposed work on potential heritage resources.

9. This report should be submitted to heritage planning staff with Heritage Planning at the City of Toronto, the Ministry of Citizenship and Multiculturalism, heritage staff at Parks Canada, and any other local heritage stakeholders that may have an interest in this project.

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APPENDIX A: HERITAGE DESIGNATION BY-LAWS

BILL NO. 126

14.18

THE CORPORATION OF THE
BOROUGH OF SCARBOROUGH

BY-LAW 18296

to designate Hillside Methodist Church on the south side Finch Avenue west of Meadowvale Road as being of historical and architectural value.

WHEREAS The Ontario Heritage Act, 1974, S.O. Chapter 122, authorizes The Council of a municipality to enact by-laws to designate a real property, including all the buildings and structures thereon, to be of historic or architectural value or interest; and

WHEREAS the Council of The Corporation of the Borough of Scarborough has caused to be served upon the owners of the lands and premises known as the "Hillside Methodist Church" on the south side of Finch Avenue west of Meadowvale Road and upon the Ontario Heritage Foundation notice of intention to so designate the aforesaid real property and has caused such notice of intention to be published in a newspaper having a general circulation in the municipality once for each of three consecutive weeks; and

WHEREAS the reasons for designation are set out in Schedule "B" hereto; and

WHEREAS no notice of objection to the said proposed designation has been served upon the Clerk of the municipality;

THEREFORE, THE COUNCIL OF THE CORPORATION OF THE BOROUGH OF SCARBOROUGH ENACTS AS FOLLOWS:

1. There is designated as being of architectural and historical value or interest the real property more particularly described in Schedule "A" hereto, known as the "Hillside Methodist Church" on the south side of Finch Avenue west of Meadowvale Road.

2. The Borough Solicitor is hereby authorized to cause a copy of this by-law to be registered against the property described in Schedule "A" hereto in the proper land registry office.

3. The Borough Clerk is hereby authorized to cause a copy of this by-law to be served upon the owner of the aforesaid property and upon the Ontario Heritage Foundation and to cause notice of this by-law to be published in a newspaper having general circulation in the Borough of Scarborough.

FIRST, SECOND and THIRD readings, February 5th, 1979.

.....
Mayor

.....
Clerk

SCHEDULE "A" - 18296

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Borough of Scarborough in the Municipality of Metropolitan Toronto (and being registered in the Registry Office for the Registry Division of Toronto Boroughs and York South), being composed of that part of Lot 7 in Concession III of the said Borough more particularly described as follows:

COMMENCING in the north limit of the said lot, at a distance of 213.84 feet measured westerly thereon from the north-east angle of the said lot;

THENCE WESTERLY along the north limit of the said lot, a distance of 177.48 feet to a point;

THENCE SOUTH 47 degrees 53 minutes EAST, a distance of 136.55 feet to a point;

THENCE EASTERLY parallel to the north limit of the said lot, a distance of 107.31 feet to a point;

THENCE NORTHERLY parallel to the east limit of the said lot, a distance of 116.79 feet to the Point of Commencement.

SCHEDULE "B" - 18296

Reasons for the designation of "Hillside Methodist Church" on the south side Finch Avenue west of Meadowvale Road.

"Hillside Methodist Church" : This church is recommended for designation for both historical and architectural reasons. It was built by the parishioners in the small rural community of Hillside in 1877 and is an example of a Gothic style board and batten building.

THE CORPORATION OF THE
BOROUGH OF SCARBOROUGH

BY-LAW 18296

to designate Hillside Methodist Church on the south side Finch Avenue west of Meadowvale Road as being of historical and architectural value.

WHEREAS The Ontario Heritage Act, 1974, S.O. Chapter 122, authorizes The Council of a municipality to enact by-laws to designate a real property, including all the buildings and structures thereon, to be of historic or architectural value or interest; and

WHEREAS the Council of The Corporation of the Borough of Scarborough has caused to be served upon the owners of the lands and premises known as the "Hillside Methodist Church" on the south side of Finch Avenue west of Meadowvale Road and upon the Ontario Heritage Foundation notice of intention to so designate the aforesaid real property and has caused such notice of intention to be published in a newspaper having a general circulation in the municipality once for each of three consecutive weeks; and

WHEREAS the reasons for designation are set out in Schedule "B" hereto; and

WHEREAS no notice of objection to the said proposed designation has been served upon the Clerk of the municipality;

THEREFORE, THE COUNCIL OF THE CORPORATION OF THE BOROUGH OF SCARBOROUGH ENACTS AS FOLLOWS:

1. There is designated as being of architectural and historical value or interest the real property more particularly described in Schedule "A" hereto, known as the "Hillside Methodist Church" on the south side of Finch Avenue west of Meadowvale Road.

2. The Borough Solicitor is hereby authorized to cause a copy of this by-law to be registered against the property described in Schedule "A" hereto in the proper land registry office.

3. The Borough Clerk is hereby authorized to cause a copy of this by-law to be served upon the owner of the aforesaid property and upon the Ontario Heritage Foundation and to cause notice of this by-law to be published in a newspaper having general circulation in the Borough of Scarborough.

FIRST, SECOND and THIRD readings, February 5th, 1979.

.....
Mayor

.....
Clerk

SCHEDULE "A" - 18296

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Borough of Scarborough in the Municipality of Metropolitan Toronto (and being registered in the Registry Office for the Registry Division of Toronto Boroughs and York South), being composed of that part of Lot 7 in Concession III of the said Borough more particularly described as follows:

COMMENCING in the north limit of the said lot, at a distance of 213.84 feet measured westerly thereon from the north-east angle of the said lot;

THENCE WESTERLY along the north limit of the said lot, a distance of 177.48 feet to a point;

THENCE SOUTH 47 degrees 53 minutes EAST, a distance of 136.55 feet to a point;

THENCE EASTERLY parallel to the north limit of the said lot, a distance of 107.31 feet to a point;

THENCE NORTHERLY parallel to the east limit of the said lot, a distance of 116.79 feet to the Point of Commencement.

SCHEDULE "B" - 18296

Reasons for the designation of "Hillside Methodist Church" on the south side Finch Avenue west of Meadowvale Road.

"Hillside Methodist Church" : This church is recommended for designation for both historical and architectural reasons. It was built by the parishioners in the small rural community of Hillside in 1877 and is an example of a Gothic style board and batten building.

DATED February 5th, A. D. 1979.

THE CORPORATION OF THE BOROUGH
OF SCARBOROUGH

BY-LAW NUMBER 18296

841

The Corporation of the Borough of
Scarborough,
150 Borough Drive,
SCARBOROUGH, Ontario,
MIP 4N7.

9213

06-01-00A

Authority: Scarborough Administrative Committee Report No. 14, Clause No. 1,
as adopted by the former City of Scarborough Council on September 2, 1997
Enacted by Council: February 4, 1999

CITY OF TORONTO

BY-LAW No. 37-1999

To designate the property at 2259 Meadowvale Road (Hillside Public School (S.S.#4)) as being of historical value or interest.

WHEREAS authority was previously granted by the Council of the City of Scarborough to designate the property at No. 2259 Meadowvale Road as being of historical value or interest; and

WHEREAS the *Ontario Heritage Act* authorizes the Council of a municipality to enact by-laws to designate real property, including all the buildings and structures thereon, to be of historical or architectural value or interest; and

WHEREAS the Council of the City of Scarbourough caused to be served upon the owners of the land and premises known as No. 2259 Meadowvale Road and upon the Ontario Heritage Foundation, Notice of Intention to designate the property and has caused the Notice of Intention to be published in a newspaper having a general circulation in the municipality as required by the *Ontario Heritage Act*; and

WHEREAS the reasons for designation are set out in Schedule "B" to this by-law; and

WHEREAS no notice of objection to the proposed designation was served upon the Clerk of the City of Scarborough; and

WHEREAS the *City of Toronto Act, 1997* provides that every by-law or resolution of the Council of the former City of Scarborough in force before Scarborough was dissolved on January 1, 1998 shall be deemed to be a by-law or resolution of the City of Toronto;

The Council of the City of Toronto HEREBY ENACTS as follows:

1. The property at No. 2259 Meadowvale Road , more particularly described and shown on Schedule "A" to this by-law, is designated as being of historical value or interest.

2. The City Solicitor is authorized to cause a copy of this by-law to be registered against the property described in Schedules "A" and "C" to this by-law in the proper Land Registry Office.

3. The City Clerk is authorized to cause a copy of this by-law to be served upon the owners of the property at No. 2259 Meadowvale Road and upon the Ontario Heritage Foundation and to cause notice of this by-law to be published in a newspaper having general circulation in the City of Toronto as required by the *Ontario Heritage Act*.

ENACTED AND PASSED this 4th day of February, A.D. 1999.

CASE OOTES,
Deputy Mayor

NOVINA WONG,
City Clerk

(Corporate Seal)

SCHEDULE "A" TO BY-LAW No. 37-1999

In the City of Toronto (formerly the City of Scarborough) and Province of Ontario, being composed of part of Lot 4 in Concession 4 in the Geographic Township of Scarborough, the boundaries of the land being described as follows:

PREMISING that the bearings hereinafter mentioned are grid and are referred to the Central Meridian 79 degrees and 30 minutes West Longitude through Zone 10 of the Ontario Co-ordinate System then;

COMMENCING at a point, the location of which may be arrived at as follows;

BEGINNING at the southwesterly angle of the said Lot 4;

THENCE North 26 degrees 38 minutes and 45 seconds East a distance of 10.51 metres to the point of commencement;

THENCE North 17 degrees 01 minutes and 45 seconds West a distance of 15.07 metres, more or less, to the intersection with the production westerly of the southerly face of wall of a two storey brick school building;

THENCE North 69 degrees 42 minutes and 30 seconds East to and along the said southerly face of wall a distance of 1.53 metres, more or less, to the westerly face of wall of a one storey brick school building;

THENCE North 17 degrees 01 minutes and 45 seconds West along the said westerly face of wall a distance of 0.51 metres, more or less, to the northwesterly corner thereof;

THENCE North 73 degrees 31 minutes and 20 seconds East along the northerly face of wall of the said one storey brick school building and the production easterly thereof a distance of 10.82 metres to a point;

THENCE South 17 degrees 01 minutes and 45 seconds East a distance of 15.68 metres to a point;

THENCE South 73 degrees 31 minutes and 20 seconds West a distance of 12.35 metres, more or less, to the point of commencement.

Being part of PIN 06054-0876(R).

The hereinbefore described land being delineated by heavy outline on Plan SYE2907 dated January 7, 1999, as set out in Schedule "C".

SCHEDULE "B" TO BY-LAW No. 37-1999

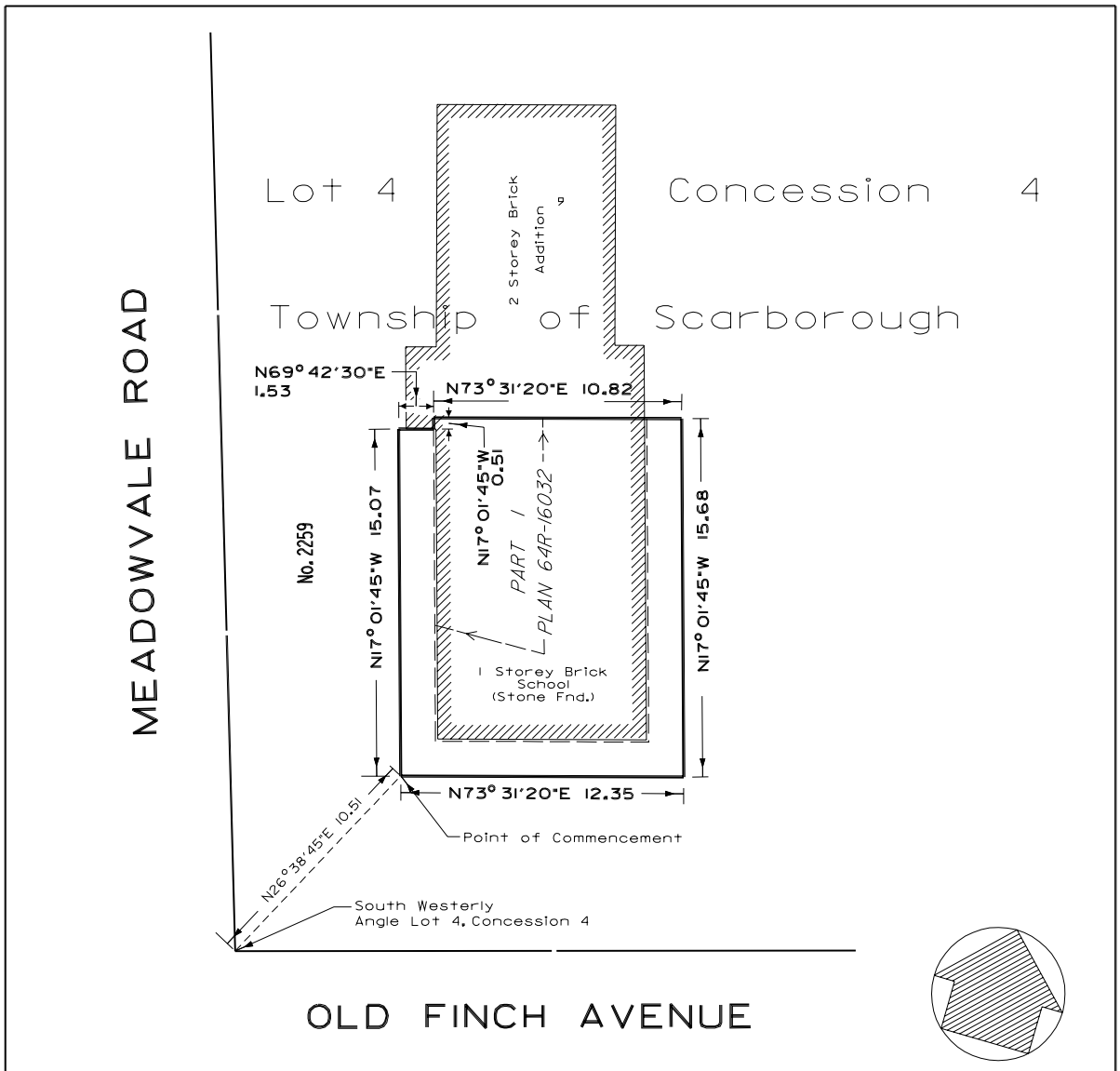
HILLSIDE PUBLIC SCHOOL (S.S. #4) is recommended for designation primarily for historical reasons. Originally built in 1872 as a board and batten, frame structure, it was moved several metres west onto a cut field stone foundations and bricked over in 1904.

Several additions and alterations over the years have changed the architectural components of the building and for these reasons, only the masonry walls, window openings and roof structure of the building are recommended for designation. The east and west walls comprise three windows which originally held 12/12 double hung sash windows. These were replaced over the years and are now in the style of 6/6. This early pane pattern should be retained. The main south facade originally held two doors and a central 12/12 double hung sash window. The doors were later bricked in and the window replaced by the existing door entrance. The 1904 datestone remains in its original location in the central part of the north gable wall and is included as part of the reason for designation. The school's original chimney and belfry no longer survive but the iron bell was retained in a new tower, added when additional classrooms were constructed to the north end of the original school edifice. The iron bell is also included as part of the designation.

The school is recommended for designation primarily for its historical context, being the oldest school building in Scarborough still used for educational purposes, and as a landmark on the north-east corner of the rural crossroad community which became known as part of Hillside.

After the building ceased to serve the modern needs of education, it was converted into an outdoor education facility, due to its proximity to the Rouge Valley, and took on a new role in the education of the young people of the wider-based Scarborough community. This adds to the unique history of the building and site and is a further basis for the recommendation of designation.

SCHEDULE "C"



Part of Premises
No. 2259 Meadowvale Road (Hillside School)

NOTE:
THIS SKETCH IS NOT A PLAN OF SURVEY AND HAS BEEN COMPILED FROM SURVEY NOTES AND OFFICE RECORDS. IT SHALL NOT BE USED EXCEPT FOR THE PURPOSE INDICATED IN THE TITLE BLOCK.

TORONTO
WORKS AND EMERGENCY SERVICES

SKETCH TO ILLUSTRATE

LAND DESIGNATED AS BEING OF ARCHITECTURAL AND HISTORICAL VALUE OR INTEREST

RATIO 1: 250

5 Metres 0 5 Metres

Drawn ME
Checked W.J.M.
Date: Jan. 7,1999

W.Kowalenko-City Surveyor

FILE M178-HI

PLAN SYE2907

SYE2907

P:\1998\UG\CWS\ENG\MAPS\SYE2907.MAP

THE CORPORATION OF THE
BOROUGH OF SCARBOROUGH

BY-LAW NUMBER 19831

to designate the Milne House under The Ontario Heritage Act as being of historical and architectural value

WHEREAS The Ontario Heritage Act, 1974, S.O. Chapter 122, authorized the Council of a municipality to enact by-laws to designate a real property, including all the buildings and structures thereon, to be of historic or architectural value or interest; and

WHEREAS the Council of The Corporation of the Borough of Scarborough has caused to be served upon the Owners of the lands and premises known as the Milne House on the north west corner of Finch Avenue East and Sewells Road, being part of Lot 9, Concession 4 and upon the Ontario Heritage Foundation notice of intention to so designate the aforesaid real property and has caused such notice of intention to be published in a newspaper having a general circulation in the municipality once for each of three consecutive weeks; and

WHEREAS the reasons for designation are set out in Schedule "B" hereto; and

WHEREAS a notice of objection to the said proposed designation has been served upon the Clerk of the municipality;

THEREFORE, THE COUNCIL OF THE CORPORATION OF THE BOROUGH OF SCARBOROUGH ENACTS AS FOLLOWS:

1. There is designated as being of architectural value or interest the real property more particularly described in Schedule "A" hereto, known as the Milne House on the north west corner of Finch Avenue East and Sewels Road.

2. The Borough Solicitor is hereby authorized to cause a copy of this By-law to be registered against the property

described in Schedule "A" hereto in the proper land registry office.

3. The Borough Clerk is hereby authorized to cause a copy of this By-law to be served upon the Owner of the aforesaid property and upon the Ontario Heritage Foundation and to cause notice of this By-law to be published in a newspaper having general circulation in the Borough of Scarborough.

FIRST, SECOND and THIRD readings, April 5, 1982.

Mayor

Clerk

SCHEDULE "A"

By-law Number 19831

ALL AND SINGULAR that certain parcel or tract of land and premises situate, lying and being in the Borough of Scarborough, in the Municipality of Metropolitan Toronto, and being composed of that part of the south half of Lot 9 in Concession 4 of the said Borough of Scarborough, designated as Part 1 on a Reference Plan desposited in the Land Registry Office for the Registry Division of Toronto Boroughs as Plan 64R-9336.

SCHEDULE "B"

By-law Number 19831

The MILNE HOUSE is recommended for architectural reasons as the only frame Gothic style house structure in Scarborough. This building is of predominantly board and batten construction on a fieldstone foundation. An added feature of the house complex is a red brick smoke house to the north of the main house.

T.B. 15641

REGISTRY DIVISION OF
TORONTO (No. 04)

I CERTIFY THIS INSTRUMENT
IS REGISTERED AS
11:00 A.M. APR 21 1982
IN BOOK

Land
Registry Office
at Toronto,
Ontario

LAND REGISTRAR

DATED April 15, A. D. 1982

THE CORPORATION OF THE BOROUGH
OF SCARBOROUGH

BY-LAW NUMBER 19831

being a by-law to designate the Milne House under The Ontario Heritage Act

Box 841

The Corporation of the Borough of
Scarborough,
150 Borough Drive,
SCARBOROUGH, Ontario,
M1P 4N7.

LCM/g

06-01-008 15641

Hillside Bridge

The Hillside Bridge is recommended for designation under the terms of the Ontario Heritage Act for historical and engineering reasons. It is located in the Third Concession, Scarborough, on the road allowance separating Lots 4 and 5. Formerly known as Kirkham's Road the right-of-way is now called Meadowvale.

Hillside Bridge was built in 1917 at a cost of $ 3000 and carries Meadowvale Road over the Little Rouge just north of the third concession road allowance known today as Finch Avenue. Just south of the bridge is Hillside School (S.S. # 4) and to the west, Hillside Church and Wm. Milne's gothic style farmhouse know as "Hillside". Although the community was never formerly identified by a post office the name Hillside has been associated with the area for more than a century and the bridge thus named.

The bridge is a Pony Warren Truss bridge similar in design to the Stott's bridge on Twyn Rivers Drive. Hillside bridge;s desk is 16 feet wide and comprises on each side. trusses having six panels about 13.75 feet long for a total length of 82.5 feet. Panel depth is 8.5 feet. The trusses were fabricated from rolled steel angle sections and plates, riveted together. The deck is carried by I-beams at each panel point located about six feet below the top of the truss. The original concrete deck has been replaced by galvanized steel grating, later zinc coated. The bridge is supported at each each on massive poured concrete abutments with wing walls which now stand well above the river bed. In recent years, underpinning of the original footings has been necessary to prevent undermining of the bridge foundations due to the eroding the the river bed, now five feet lower than original.

The bridge was designed to carry local traffic across the river in a rural environmental setting. It continues to serve this purpose today as this area of Scarborough forms part of the Rouge Valley Park. It is important that this bridge be preserved for future generations to understand and appreciate our rural heritage.

Maxwell's Bridge

Maxwell's Bridge is recommended for designation under the terms of the Ontario Heritage Act for historical and engineering reasons. It is located in the Third Concession, Scarborough, near the boundary between lots 1 and 2 and just north of third concession road allowance.

Maxwell's bridge was built in 1927 at a cost of under $ 8,000. and carries Twyn Rivers Drive over the east branch of the Rouge River, which is also known as the Little Rouge. The bridge name was once associated with Maxwell's Mill which was located just north of the bridge structure. Historically, what is now Twyn Rivers Drive is an extension of Sheppard Avenue and was built to replace earlier access roads to the saw and grist mills and a woollen factory on the Rouge and Little Rouge. These 19th century industries were an important part of our rural heritage and the Rouge area today continues to reflect our past rural environment.

The bridge itself is a reinforced concrete, bowstring arch "through" structure, of a type pioneered in Canada by Frank Barber C.E. in the early 1900's. Barber is considered one of the most influential designers to work with reinforced concrete and was one of the first to build reinforced concrete truss bridges in Canada. Maxwell's bridge was patterned after the Freeman Bridge, which once spanned the Rouge River just west of the 9th Line, Markham, on Steeles Avenue. Few of these bridge types remain in Ontario today and Maxwell's Bridge was one of the last of this type to be constructed in the province. The bridge has a span of approximately 60 feet and a clear roadway width of 21 feet. The arches are a massive 19 inches thick and 21 inch deep, rising about six feet above the roadway at mid-span. The builder was likely C.E. Fraser, professional engineer , but there appears to be no surviving records to verify this.

The bridge survived a disastrous flooding of the valley in 1929 as well has Hurricane Hazel and other major storms over its seventy year history. Although road salt has resulted in concrete flaking, the bridge still appears to be structurally sound, although repairs such as those used in the past (srayed-on concrete "gunnite") are again required.

Sewell's Road Bridge

Sewell's Road Bridge is recommended for designation under the terms of the Ontario Heritage Act for historical and engineering reasons. It is located in the Third Concession, Scarborough, near the boundary between Lots 8 and 9 and north of the fourth concession road allowance known today as Old Finch Avenue.

Sewell's Road bridge was built in 1912 and carries the road across the main branch of the Rouge River. For over a century the Sewell family occupied large farms in Lots 8 and 9 in the Fourth concession. In time, the road leading past their farms became known as Sewell's Road and the bridge likewise became known as the Sewell's Road Bridge.

In 1911, Frank Barber, C.E. was commissioned to design a bridge to replace an old timber crossing. Barber's original plans for a steel topped, concrete floor bridge were rejected and he was instructed to call tenders for a less expensive, suspension bridge. The bridge was completed in 1912 and a total cost of $8,197 and spans 160 feet.

Technically described as a "stiffened suspension bridge", Sewell's bridge measures 100 feet between the towers, with a 30 foot approach span at each end. Stiffening trusses are Warren type, 54 inches high each with 6 panels in the approach spans and twenty in the main span. Panels are five feet long, making each truss 160 feet in total length. The width between trusses is 12 feet clear. Each of the two multi strand wire suspension cables are approx. 170 feet long and two inches in diameter. Each pair of hangers is in turn, connected to a floor beam which is attached to the trusses at panel points.

At each end of the main span are towers which are fabricated from rolled steel channel sections joined together by riveted cover plates resulting in a approx. square cross section. Each tower is supported on a pivot bearing and rises 15 feet above the poured concrete piers to a saddle over which the suspension cable passes. The tops of each pair of towers is linked by sway bracing, allowing a clear height of 13 feet for vehicles.

Sewell's bridge (cont.)

Each end of the suspension cables terminates in a massive turnbuckle which is attached to the anchorage, deeply buried beyond the bridge. The poured concrete deck is 12 feet wide with a 6 inch curb on each side, resting on the steel cross beams. Like other Barber-designed bridges, the Sewell's Road bridge survived both the disastrous flooding of 1929 and Hurricane Hazel of 1954.

Besides being one of the oldest bridges in Scarborough, the suspension bridge is believed to be the only remaining suspension bridge on a public road in Ontario. In 1980 the bridge was refurbished at a cost of $262,548 and was declared a historic site by Scarborough in 1981. Although the city has erected a historic plaque on the site, adjacent to the bridge, the structure has not yet formally been designated under the terms of the Heritage Act.

Stott's Bridge

Stott's Bridge is recommended for designation under the terms of the Ontario Heritage Act for historical and structural reasons. It is located in the Third Concession, Scarborough, in Lot 2, and forms part of the third concession road allowance.

Stott's bridge was built 1915 at a cost of $ 3254 and carried Twyn Rivers Drive over the west, main branch of the Rouge River. The bridge name was once associated with William Stott's family who owned adjacent property and did repair work for many years on the steep hill road which approaches the bridge from the west.

The bridge is similar is design to the Hillside Bridge built two years later. The bridge construction was likely supervised by Frank Barber C.E. who described the bridge as a Pony Warren Truss Bridge. Pony Warren Truss bridges (unlike the Through Warren Truss style which required cross bracing) do not require cross bracing, thereby eliminating height restrictions. The bridge has a span of 68 feet clear, consisting of two trusses each with five panels approximately 14 feet long and 8 feet high, a clear inside width of 14 feet, fabricated from rolled steel sections and plates, riveted together. The deck is supported on cross beams, located at each panel point, approximately seven feet below the top of the trusses. The original reinforced concrete deck was replaced with a galvanized steel grating and later coated with zinc. The bridge is supported at each end on mass concrete abutments with wing walls.

The government of Ontario has stated in their *Ontario Heritage Bridge Program* (revised 1991) that: "Bridges can be important parts of our engineering and architectural heritage. Perhaps more than any other structure built by man, they exhibit major historical changes and innovation in the development and use of materials, in design, and in construction methods. Oftentimes bridges are a visual delight and make a positive contribution to amenity in their surroundings." This is certainly the case with the Stott's bridge as well as other such structures in the Rouge Valley area.